

2 of 2

**SPECIFICATIONS  
FOR  
RUNWAY 13R - 31L REHABILITATION**

at

**Boeing Field / King County International Airport  
Seattle, Washington**

Issued by



**King County**

**June 1985**

SPECIFICATIONS  
FOR  
RUNWAY 13R-31L REHABILITATION  
AT  
BOEING FIELD/KING COUNTY INTERNATIONAL AIRPORT  
SEATTLE, WASHINGTON

KING COUNTY CONTRACT NO. C09630C  
AIP NO. 3-53-0058-06

Issued by  
King County  
June 1985

DESIGN AND PROJECT MANAGEMENT BY

ABAM Engineers Inc.  
33301 Ninth Avenue South  
Federal Way, Washington 98003  
206/241-2040  
Ron Butler

PROJECT ADMINISTRATION BY

Jeffrey W. Winter, PE  
King County International Airport  
P.O. Box 80245  
Seattle, Washington 98108  
206/344-7380

ADDENDUM NO. 1  
KING COUNTY CONTRACT NO. C09630C  
AIP NO. 3-53-0058-06

RUNWAY 13R-31L REHABILITATION  
AT  
BOEING FIELD/KING COUNTY INTERNATIONAL AIRPORT  
SEATTLE, WASHINGTON

19 June 1985

NOTICE TO ALL BIDDERS:

You are hereby notified  
of the following changes  
to the drawings and specifications  
for the above named project.

KCSlip4 37097

SEA403642

## SPECIAL PROVISIONS

Add the following section:

### SECTION 12 - AWARD OF CONTRACT

For the purpose of determining the lowest bidder, King County reserves the right to award on the basis of the base bid only or a combination of base bid and any alternate bid.

## TECHNICAL SPECIFICATIONS

### Section 9.2.1 Aggregate

Add the following paragraph.

6. Alternate Aggregates: The contractor may use aggregate which conforms to the grading requirements of Section 9-03.8 of the Standard Specifications for Class B Asphalt Concrete in lieu of the aggregate grading specified in Table 9.3.2-3. All other aggregate requirements specified herein shall remain applicable.

### Section 9.4.12 - Acceptance Sampling and Testing of Bituminous Mixture (density)

Delete Paragraph 1 and substitute the following:

1. Density measurements will be made every 200 ft on each strip for acceptance of density. Further testing during paving, for control purposes only, may be made at the discretion of the engineer to assure that the target density is met.

Delete Paragraph 3 and substitute the following:

3. Pavement Density: The average percent compaction (target) of all density tests taken (every 200 ft of each strip) of in-place pavement shall be 98% of the average density of the laboratory-prepared specimens. No individual compaction test shall fall below 96.7%. Any portion of the pavement falling below 96.7% shall be subject to removal and replaced at the contractor's expenses. The pavement density shall be determined by dividing the nuclear density of each test by the average density of the laboratory specimens.

Delete Paragraph 4 and substitute the following:

4. Acceptance Criteria: Acceptance of each lot (i.e., 1000 tons of bituminous surface course or one day's tonnage whichever is less) shall be based on the percentage of material within specification limits (PWL). The PWL is determined using standard statistical techniques and involves the number of tests in each lot (n) and the quality index (Q). Five tests, exclusive of tests described in Paragraph 1 of this section, shall be taken to determine acceptance criteria for payment for each

ADDENDUM NO. 1 - 1



lot. Acceptance for density shall meet the criteria of both Paragraphs 3 and 4 of this section. The quality index is calculated from the following formula:

$$Q = \frac{X - L}{R}$$

where

Q = Quality index

X = Average of pavement densities (percent compaction)

L = Lower specification limit (96.7%)

R = Range - difference between highest and lowest pavement densities (percent compaction)

The PWL shall be determined from Table 9.4.12-1, using the number of tests (n) and the quality index (Q).

Each lot of bituminous mix shall be accepted for density when the PWL equals or exceeds 90%. Each lot not meeting the 90% PWL requirement will be accepted at an adjusted contract unit price in accordance with Table 9.4.12-2.

# RUNWAY 13R-31L REHABILITATION TABLE OF CONTENTS

	<u>Number of Pages</u>
 <u>PART I - BID DOCUMENTS</u>	
Invitation to Bid . . . . .	3
Instructions to Bidders . . . . .	8
Form of Bid . . . . .	8
Minority Business Enterprise Registration Forms . . . . .	1
Contractor's Declaration of Minority/Women's Business (M/WB) Subcontracting . . . . .	1
Performance Bond . . . . .	1
Payment Bond . . . . .	1
Certificate of Insurance (Liability) . . . . .	1
Contract . . . . .	2
Certificate of Compliance . . . . .	1
Minority and Women's Business Participation and Affirmative Action for Employment . . . . .	4
King County Ordinance 4528 Procedures . . . . .	1
Ordinance No. 4528 . . . . .	2
Constructin Personnel Inventory Report . . . . .	2
Affidavit and Certificate of Compliance . . . . .	2
Letter to Contractor re Union Compliance . . . . .	1
Sworn Statement of Compliance with Ordinance 4528 . . . . .	1
Contact Agencies . . . . .	1
General Conditions . . . . .	11
Special Provisions . . . . .	18
Federal Wage Rates . . . . .	20
 <u>PART II - TECHNICAL SPECIFICATIONS</u>	
1.0 Mobilization . . . . .	1
2.0 Portland Cement Concrete Pavement and Associated Work . . . . .	12
3.0 Minor Spall Repair . . . . .	2
4.0 Fabric Joint Treatment . . . . .	6
5.0 Joint Interface Repair . . . . .	1
6.0 Asphalt Removal and Replacement . . . . .	1
7.0 Asphalt Crack Repair . . . . .	1
8.0 Tack Coat . . . . .	3
9.0 Asphalt Concrete Pavement . . . . .	17
10.0 Runway and Taxiway Painting . . . . .	3
11.0 Pavement Grooving . . . . .	2
12.0 Porous Friction Course . . . . .	17

KING COUNTY PURCHASING AGENCY  
620 King County Administration Building  
Seattle, Washington 98104

Contract No. C09630C

INVITATION TO BID

Sealed proposals will be received only at the Office of the King County Purchasing Agency, 620 King County Administration Building, Seattle, Washington 98104, until 2:00 p.m., 25 June 1985, which is the bid opening date, for the furnishing of all necessary labor, materials, and equipment and performing all work required for a project entitled:

RUNWAY 13R-31L REHABILITATION  
BOEING FIELD/KING COUNTY INTERNATIONAL AIRPORT  
SEATTLE, WASHINGTON

The project involves repair of the existing runway (including 4,608 linear ft of spall repairs, 50 sq yd of asphalt repairs, fabric treatment of 105,486 linear ft of joints and cracks, replacement of 336 sq yd of damaged portland cement concrete [PCC] 967 sq yd of slabs, asphalt concrete [AC] pavement removal, 3,074 linear ft of AC crack repairs, and 1,001 linear ft of interface repairs between PCC/AC pavements), 42,800 tons of asphalt concrete pavement overlay of the existing runway, pavement markings, and surface treatment (grooving or porous friction course) of the new surface to minimize hydroplaning.

FEDERAL STATEMENTS

The proposed contract is under and subject to Executive Order 11246 of 24 September 1965 and to the Equal Employment Opportunity (EEO) and Federal Labor Provisions.

All labor on the project shall be paid no less than the minimum wage rates established by the U.S. Secretary of Labor.

Each bidder must supply all the information required by the bid documents and specifications.

The EEO requirements, labor provisions, and wage rates are included in the specifications and bid documents and are available for inspection at the Administration Office, King County International Airport, 7211 Perimeter Road, Seattle, Washington 98108.

INVITATION TO BID - 1

Each bidder must complete, sign, and furnish with his bid a "Certification of Nonsegregated Facilities" and a statement entitled "Bidders Statement on Previous Contracts Subject to EEO Clause," as contained in the bid proposal.

A contractor having 50 or more employees and his subcontractors having 50 or more employees and who may be awarded a subcontract of \$50,000 or more will be required to maintain an affirmative action program, the standards for which are contained in the specifications.

To be eligible for award, each bidder must comply with the affirmative action requirements which are contained in the specifications.

Minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award of any contract entered into pursuant to this advertisement.

This contract will be funded in part by a grant from the Federal Aviation Administration. In accordance with federal requirements, King County has determined that this contract has subcontracting possibilities and has, therefore, established goals on this contract of Minority Business participation 15% and Women's Business participation 7% for the use of firms owned and controlled by minorities and women. All prospective bidders are directed to the Instructions for Bidders with regard to the procedures King County will utilize to achieve these goals.

Women will be afforded equal opportunity in all areas of employment. However, the employment of women shall not diminish the standards or requirements for the employment of minorities.

#### COUNTY STATEMENTS

All bids received will be opened in public at the time and place herein specified and all bidders and other persons who may be interested in any bid, or the subject matter for which the bids are called, are hereby invited to be present at the opening of such bids.

A 100% performance bond and a 100% payment bond will be required of the successful bidder.

All bids must be accompanied by a bid deposit in the form of a surety bond, postal money order, cash, cashier's check, or certified check in the amount equal to 5% of the amount of the bid proposed. Upon failure of the successful bidder to enter into the contract and to furnish a Contractor's Bond within 10 days after notice of award of bid, exclusive of the day of notice, the amount of the bid deposit will be forfeited to King County.

King County reserves the right to reject any or all bids and to waive formalities.

No bids will be accepted after the time and date shown above.

INVITATION TO BID - 2

Copies of the bid documents may be obtained at the King County Purchasing Agency, 620 King County Administration Building, Seattle, Washington 98104, upon making a refundable payment of \$25.00 for each set.

KING COUNTY PURCHASING AGENCY  
Telephone 206/344-4210

DEPARTMENT: PUBLIC WORKS, AIRPORT DIVISION

INVITATION TO BID - 3

KCSlip4 37103

SEA403648

## INSTRUCTIONS TO BIDDERS

### A. EXAMINATION OF SITE AND CONDITIONS

The bidder is required to examine carefully the site of the proposed work, the proposal, plans and specifications, and contract forms before submitting a proposal. It is mutually agreed that submission of a bid shall be considered prima facie evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work as scheduled, or as at any time altered without resulting in increases or decreases of more than the percentage limits stipulated in the hereinafter mentioned Standard Specifications, and as the character, quality, and quantities of work to be performed and material to be furnished, including said increases and decreases, and as to the requirements of the plans, general conditions, special provisions, technical specifications, and contract.

A pre-bid conference will be held 20 June 1985 at 2:00 p.m. PDT at the Administration Office, King County International Airport, 7211 Perimeter Road, Seattle, Washington.

No statement made by any officer, agent, or employee of King County, in relation to the physical conditions pertaining to the site of the work, will be binding on King County.

### B. QUANTITIES

Bids shall be submitted on the basis of unit prices. The estimate of quantities as shown on the plans and/or specifications shall be used only for comparing bids and determining the amount of the contract. The basis of payment of this contract will be the actual quantities of work performed in accordance with the plans and specifications and as specified therein for payment and, if upon the completion of the improvement said actual quantities should show either increase or decrease from the quantities shown on the plans or specifications, the unit bid prices in the proposal shall still prevail, except as otherwise provided.

### C. LAWS AND REGULATIONS

The bidder is assumed to be familiar with all federal, state, and county laws and regulations, which in any manner affect those engaged or employed in the work or the materials or equipment used in the proposed construction, or which in any way affect the conduct of the work, and no pleas of misunderstanding will be considered on account of ignorance thereof. If the bidder or contractor shall discover any provision in the plans, specifications, or contract which is contrary to or inconsistent with any

law or regulations, he shall forthwith report it to the manager of the Purchasing Agency in writing.

D. BID AND PERFORMANCE GUARANTEE

A certified check, bid bond, or cash for a sum not less than 5% of the proposal shall accompany each bid, as evidence of good faith, and as a guarantee that if awarded the contract, the bidder will execute the contract and furnish a 100% performance bond and a 100% payment bond, said performance bond and payment bond to be furnished by a surety company acceptable to King County. (Note that a 200% public works type bond would be an acceptable substitute for the two separate bonds.)

E. FILLING IN PROPOSAL FORMS

The bidder shall submit his proposal on the forms furnished by King County. All blank spaces in the proposal form shall be properly filled in. If the proposal is made by a partnership, it shall contain the names of each partner and shall be signed in the firm name, followed by the signature of the person signing. If the proposal is made by a corporation, it shall be signed by the name of the corporation, followed by the written signature of the officer signing, and the printed or typewritten designation of the office he holds in the corporation. The address of the bidder shall be typed or printed on the proposal.

F. SUBMISSION OF PROPOSAL

The proposal sheets with appropriate forms, as provided loose leaf behind the cover sheet in these specifications, shall be completely sealed in a package properly addressed to the Office of the King County Purchasing Agency, 620 King County Administration Building, Seattle, Washington 98104, with the name of the bidder, the bid number, and the name of the project written on the outside of the package.

Bids will be received at the time and place stated in the Invitation to Bid. The Invitation to Bid provides that a fee or deposit for plans and specifications will be required from each bidder.

King County reserves the right to reject any or all bids, and to waive formalities.

G. PROHIBITION OF ALTERATIONS

Except as otherwise provided herein, proposals which are incomplete, or which are conditioned in any way, or which contain erasures, alterations, or items not called for in the proposal, or which are not in conformity to the law, may be rejected as informal.

INSTRUCTIONS TO BIDDERS - 2

The proposal form invites bids on definite plans and specifications. Only the amounts and information asked for on the proposal form furnished will be considered as the bid. Each bidder shall bid upon the work exactly as specified and as provided in the proposal form.

No oral or telephonic proposals or modifications will be considered.

Modification of proposals already received will be considered only if the request and modification is made prior to the scheduled closing time for the receipt of the proposals. All modifications must be made in writing, over the signature of the bidder.

#### H. WITHDRAWAL OF PROPOSAL

At any time prior to the scheduled closing time for receipt of proposals, any bidder may withdraw his proposal, either personally or by telegraphic or written request. After the scheduled closing time for the receipt of proposals or before award of contract, no bidder will be permitted to withdraw his proposal unless said award is delayed for a period exceeding 60 days.

#### I. OPENING OF PROPOSAL

At the time and place set for the opening and reading of proposals, each and every proposal (except those which may have been withdrawn in accordance with the above WITHDRAWAL OF PROPOSAL) received prior to the scheduled closing time for receipt of proposals will be publicly opened and read aloud, irrespective of any irregularities or informalities in such proposals.

#### J. EXECUTION OF CONTRACT

The successful bidder will be required, within 10 days after receiving from King County properly prepared contract documents, to execute said contract and to furnish performance and other required bonds satisfactory to King County. Before commencing work, the Contractor will be required to furnish a certificate showing satisfactory proof of carriage of the required insurance.

#### K. RCW 82

Before payment by the Contractor of any taxes to the Department of Revenue for or on account of any materials or work involved in this contract, the parties shall determine the amount which may be claimed due under the provisions of RCW 82 and such sum shall be withheld by the County from the contract price to be paid and be paid by the County directly to said department if found to be due by final determination of the courts of the State of Washington.



L. INSTRUCTIONS FOR CONSTRUCTION BID  
CONDITIONS -- AFFIRMATIVE ACTION REQUIREMENTS

All bids will be opened at the specified time by the purchasing manager of King County or his designee. The apparent successful offeror will be contacted by the King County contract compliance officer as to actions that must be taken to receive approval of an affirmative action program. This approval will be necessary before the contract will be signed.

M. COMPLETENESS OF DOCUMENTS

The bidder shall verify that all documents supplied by the Owner, and upon which the bidder is basing his bid, are full and complete with no missing pages, sheets, or unintentional blank spaces. Submittal of a bid indicates the bidder has verified he has obtained all Owner-supplied bidding documents. No claim for additional work due to missing bid information will be allowed.

N. TERMINATION PRIOR TO CONTRACT SIGNING

The bidders are advised that the County reserves the right to choose not to award the contract up to the time the County signs the contract document, including after the Notice of Selection has been issued. Such termination shall occur if in the best interests of the County, including, but not limited to, the continuation of or commencement of legal action with respect to any applicable permits for this project. In submitting the bid, the bidder agrees such termination will not result in any claims or causes of action for costs or damages by the bidders against the County.

O. PREQUALIFICATION OF SUCCESSFUL OFFEROR

If requested by the Engineer, the successful offeror shall provide, prior to the award of the contract, evidence of his qualifications to do the types of construction work in this project. This information may include past and current projects involving similar work and equipment and personnel available to do this project.

P. NECESSARY FORMS PERTAINING TO AFFIRMATIVE ACTION FOR  
EMPLOYMENT AND MINORITY AND WOMEN'S BUSINESS PARTICIPATION

King County has both an affirmative action program relating to employment (King County Ordinance No. 4528) and a minority/women's business participation policy relating to subcontractors and suppliers (King County Ordinance No. 5983). More detailed instructions as to the policies and the actions required under both ordinances are bound in these specifications as part of bidding instructions. It is each bidder's obligation to review this information before submitting a bid for this project.

THE FOLLOWING FORMS MUST BE COMPLETED IN CONJUNCTION WITH THE PROPOSAL ITSELF.

1. Minority/Women's Business Registration Form. This is attached to the proposal. It must be completed and submitted with the proposal, if the business is minority- or women-owned.

2. Contractor's Declaration of Minority/Women's Business (M/WB) Subcontracting. This form is also attached to the proposal and it must be completed. It may be submitted with the proposal, but must in any case be delivered to the King County Purchasing Agency no later than the close of business on the day following the bid opening.

THE FOLLOWING FORMS, WHILE NOT PART OF THE PROPOSAL, MUST BE SUBMITTED AFTER THE BID OPENING AND PRIOR TO AWARD OF CONTRACT. (Sample forms are bound following Ordinance No. 4528 sheet.)

1. Personnel Inventory Report. To be completed and signed.

2. Affidavit and Certificate of Compliance. To be completed, signed, and notarized.

3. Sworn Statement of Compliance (union form). If you have union employees, to be completed, signed by a union officer, and notarized.

Q. FEDERAL REQUIREMENTS

The following federal requirements must be complied with by the bidder. Where the federal requirements are in conflict with County requirements, the more stringent requirements shall be met.

1. Required Notice for All Contracts

a. The bidder (proposer) must supply all the information required by the proposal forms and specifications.

b. King County, in accordance with Title VI of the Civil Rights Acts of 1964, hereby notifies all bidders that they (bidders) must affirmatively ensure that, in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for award.

c. All labor on the project shall be paid no less than the minimum wage rates established by the U.S. Secretary of Labor.

2. Required Notices for Contracts Over \$10,000

a. Each bidder will be required to comply with the affirmative action plan for equal employment opportunity prescribed by the Office of Contract Compliance (OFCC), United States Department of Labor, Regulations

of the Secretary of Labor (41 CFR 60), or by other designated trades used in the performance of the contract and other nonfederally involved contracts in the area geographically defined in the plan.

b. The proposed contract is under and subject to Executive Order 11246 of 24 September 1965, as amended, and to the equal opportunity clause.

c. Each bidder must submit with his bid a Certification of Nonsegregated Facilities and a statement entitled "Bidders Statement Previous Contracts Subject to EEO Clause," as contained in the bid proposal. In addition,

(1) Contractors receiving federally assisted construction contract awards, which are not exempt from the provisions of the equal opportunity clause, will be required to provide for the forwarding of this notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions of the equal opportunity clause. A Certification of Nonsegregated Facilities must be submitted prior to award of any such subcontract exceeding \$10,000.

(2) Contractors receiving subcontract awards exceeding \$10,000, which are not exempt from the provisions of the equal opportunity clause, will be required to provide for the forwarding of this notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions of the equal opportunity clause.

Note: The penalty for making false statements in offers is prescribed in 18 USC 1001.

d. When a determination has been made to award a contract or subcontract to a specific contractor, such contractor is required, prior to the award or after the award, or both, to furnish such other information as the FAA, the sponsor, or the director of OFCC requests.

e. Equal Employment Opportunity (EEO) and labor provisions, when applicable, are included in the bidding documents and are available for inspection at the Administration Office, King County International Airport, 7211 Perimeter Road, Seattle, Washington 98108.

f. Contractors and subcontractors may satisfy EEO requirements of paragraph 2 of the EEO contract clause by stating in all solicitations or advertisements for employees that

"All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin."

or by using a single advertisement in which appears in clearly distinguished type the phrase

"An equal opportunity employer"

INSTRUCTIONS TO BIDDERS - 6

g. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in the covered areas, are as follows:

#### GOALS AND TIMETABLES

<u>Goals for Women:</u>	6.9%
<u>Goals for Minorities:</u>	7.2%

h. By operation of the Order, The Notice of Requirement for Affirmative Action to Insure Equal Employment Opportunity (Executive Order 11246), and the Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246) shall be deemed to be a part of this solicitation and of every contract and subcontract, as appropriate, required by the Order and regulations.

3. Required Notice for Contractors with 50 or More Employees and a Contract of \$50,000 or More

a. A contractor having 50 or more employees and first tier sub-contractors having 50 or more employees and who may be awarded a subcontract of \$50,000 or more will, within 120 days from contract commencement, be required to develop a written affirmative action compliance program for each of its establishments. (State and local governments are exempt.)

b. Within 30 days after award of this contract, the contractor shall file a compliance report (SF 100) if the contractor has not submitted a complete compliance report within 12 months preceding the date of award.

c. State and local governments are exempt from the requirements of filing the annual compliance report (SF 100).

d. The contractor shall require the subcontractor on any first tier subcontracts, irrespective of dollar amount, to file an SF 100 within 30 days after award of the subcontract if the above three conditions apply. An SF 100 will be furnished upon request. The SF 100 is normally furnished annually to contractors, based on a mailing list currently maintained by the Joint Reporting Committee.

In the event a contractor has not received the form, he may obtain it by writing to the following address:

Joint Reporting Committee  
1800 G Street  
Washington, DC 20506

4. This contract will be funded in part by a grant from the U.S. Department of Transportation, Federal Aviation Administration. Regulations promulgated by the U.S. Department of Transportation, 49 CFR Part 23 (45 Fed Reg 21172, 31 March 1980) establish certain requirements with regard to

INSTRUCTIONS TO BIDDERS - 7

participation by Minority Business Enterprise (MBE) on U.S.-Department-of-Transportation-assisted contracts. In order to comply with these federal requirements, King County and all bidders on this contract will utilize the following procedures:

a. For the purpose of these requirements, MBE means a small business concern as defined pursuant to Section 3 of the Small Business Act and implementing regulations, which is owned and controlled by one or more minorities or women. For the purpose of these requirements, owned and controlled means a business

(1) Which is at least 51% owned by one or more minorities or women or, in the case of publicly owned business, at least 51% of the stock of which is owned by one or more minorities or women; and

(2) Whose management and daily business operations are controlled by one or more such individuals.

b. King County has determined that this contract has subcontracting possibilities and therefore provides opportunities for MBE participation. King County has established the following goals for MBE participation on this contract:

Minority Business Participation	15%
Women's Business Participation	7%

Each bidder shall complete that portion of the Bid Form indicating his ability to comply with the above goals of MBE utilization for this project. Should the bidder be unable to meet these goals, documentation must accompany the bid which clearly shows the good-faith efforts taken to meet these goals. A copy of the Department of Transportation regulations is available at the Administration Office, King County International Airport, 7211 Perimeter Road, Seattle, Washington, for your review.

UNIT PRICE BID

Place: Room 620, King County  
Administration Building

Date: \_\_\_\_\_

PROPOSAL OF \_\_\_\_\_  
(hereinafter called "Bidder"), a corporation organized and existing under  
the laws of the state of \_\_\_\_\_, a partnership, or an individual  
doing business as \_\_\_\_\_

To: King County Bid Board  
King County, Washington

Gentlemen:

Having carefully examined the plans, specifications, and contract documents  
for the project entitled

RUNWAY 13R-31L REHABILITATION  
BOEING FIELD/KING COUNTY INTERNATIONAL AIRPORT  
SEATTLE, WASHINGTON

as prepared by ABAM Engineers Inc., as well as the site of the proposed  
work, and being familiar with all of the conditions surrounding the construc-  
tion of the proposed project including the availability of materials and  
labor, the undersigned hereby proposes to furnish all labor, materials, and  
supplies, and to construct the project in accordance with contract documents,  
within the time set forth therein, and at the prices stated below. These  
prices are to cover all expenses incurred in performing the work required  
under the contract documents, of which this proposal is a part.

A. BASE PROPOSAL

The undersigned bidder understands that the quantities of work as shown  
herein are approximate only and subject to increase or decrease, and offers  
to do the work whether the quantities are increased or decreased, at the  
unit prices stated as follows:

NOTE: Show unit prices for all items, all extensions, and the total  
amount of bid. Show unit prices both in writing and in figures. In case of  
discrepancy, the amount shown in writing will govern.

\_\_\_\_\_  
Legal Name of Person, Firm, or  
Corporation Submitting Bid

FORM OF BID - 1

Unit Prices to be Written in Words and Figures

No.	Approx Qty	Description and Unit Price	Amount (dollars/cents)
1	Lump Sum	Mobilization _____ (\$ _____) per lump sum	\$ _____
2	29 LF	Major spall repair, 4-in. width, per linear ft _____ (\$ _____) per linear ft	\$ _____
3	244 LF	Major spall repair, 8-in. width, per linear ft _____ (\$ _____) per linear ft	\$ _____
4	4,608 LF	Minor spall repair, per linear ft _____ (\$ _____) per linear ft	\$ _____
5	50 SY	Asphalt repair, per sq yd _____ (\$ _____) per sq yd	\$ _____
6	3,074 LF	Crack sealing, per linear ft _____ (\$ _____) per linear ft	\$ _____
7	105,486 LF	Fabric joint treatment, per linear ft _____ (\$ _____) per linear ft	\$ _____

\_\_\_\_\_  
Legal Name of Person, Firm, or  
Corporation Submitting Bid

Unit Prices to be Written in Words and Figures

No.	Approx Qty	Description and Unit Price	Amount (dollars/cents)
8	336 SY	Portland cement concrete slab replacement, per sq yd _____ (\$ _____) per sq yd	\$ _____
9	967 SY	Asphalt pavement removal and replacement, per sq yd _____ (\$ _____) per sq yd	\$ _____
10	55 LF	Asphalt crack repair, per linear ft _____ (\$ _____) per linear ft	\$ _____
11	1,001 LF	Joint interface repair, per linear ft _____ (\$ _____) per linear ft	\$ _____
12	28,000 Gal	Tack coat, per gallon _____ (\$ _____) per gallon	\$ _____
13	42,800 Tons	Asphalt concrete pavement, per ton _____ (\$ _____) per ton	\$ _____
14	Lump Sum	Pavement markings _____ (\$ _____) per lump sum	\$ _____
TOTAL BASE BID AMOUNT (Items 1 through 14)			\$ _____

\_\_\_\_\_  
Legal Name of Person, Firm, or  
Corporation Submitting Bid



B. ALTERNATE BIDS

The undersigned bidder proposes to provide a surface friction treatment to the new asphalt concrete pavement as shown on the plans and as specified herein, based on the following work items and unit prices whether the quantities are increased or decreased. This work shall be completed within the contract time limits as defined in these Contract Documents. Undersigned agrees the Owner has the right to reinstate, at bid prices, an Alternate Bid not incorporated into the contract, if the Owner so notifies him within five consecutive calendar days after the Notice to Proceed. Bid item numbers for the Alternate Bid items have been identified with an "A" notation. Only one of the items, 15A or 16A, will be selected by King County, not both.

Unit Prices to be Written in Words and Figures

No.	Approx Qty	Description and Unit Price	Amount (dollars/cents)
15A	104,200 SY	Pavement grooving, per sq yd	
		_____	\$ _____
		(\$ _____) per sq yd	
16A	158,300 SY	Porous friction course, per sq yd	
		_____	\$ _____
		(\$ _____) per sq yd	

C. SUBCONTRACTORS

The undersigned agrees that this bid includes both minority and women's business participation as required by King County Ordinance No. 5983. This will be documented by the submittal of the attached Contractor's Declaration of Minority/Women's Business (M/WB) Subcontracting form. This form may be submitted with the Proposal but in any case must be received by the King County Purchasing Agency no later than the close of business on the day following the bid opening.

The undersigned further agrees that, based on the total dollar amount of the bid submittal, the following minimum set-aside percentages for minority and women's business participation will be met.

\_\_\_\_\_  
Legal Name of Person, Firm, or  
Corporation Submitting Bid

Minority Business Enterprises  
Women's Business Participation

15%  
7%

In the absence of a waiver, any bid which fails to meet the above set-aside requirements shall be deemed nonresponsive.

D. MINORITY/WOMEN'S BUSINESS REGISTRATION

Bidding general contractors which are minority/women's businesses shall complete the attached Minority/Women's Business Registration form and include it with this proposal.

E. QUANTITIES

Payment will be made on the basis of actual quantities of work authorized and completed and at the unit prices quoted in the proposal.

F. SALES TAX

The undersigned agrees that the foregoing Base Bid and Alternate Bids do not include King County's obligation for Washington State or local sales taxes. King County will pay the Washington State sales tax only on the total contract price.

G. ADDENDUM RECEIPT

Receipt of the following addenda to the Contract Documents is hereby acknowledged.

Addendum No. \_\_\_\_\_ Date \_\_\_\_\_

Addendum No. \_\_\_\_\_ Date \_\_\_\_\_

H. FEDERAL STATEMENTS

1. Bidder's Statement on Previous Contractors  
Subject to EEO Clause

The bidder (proposer) has \_\_\_\_\_ has not \_\_\_\_\_ participated in a previous contract subject to the nondiscrimination clause prescribed by Section 202 of Executive Order No. 11246 dated September 24, 1965.

The bidder (proposer) has \_\_\_\_\_ has not \_\_\_\_\_ submitted compliance reports in connection with any such contract as required by applicable instructions.

\_\_\_\_\_  
Legal Name of Person, Firm, or  
Corporation Submitting Bid

If the bidder (proposer) has participated in a previous contract subject to the nondiscrimination clause and has not submitted compliance reports as required by applicable instructions, the bidder (proposer) shall submit Standard Form 100 (for federal construction contracts) with the bid or proposal indicating current compliance.

2. Certification of Nonsegregated Facilities

The federally assisted construction contractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The federally assisted construction contractor certifies further that he will not maintain or provide for his employees segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The federally assisted construction contractor agrees that a breach of this certification is a violation of the equal opportunity clause in this contract.

As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin, because of habit, local custom, or any other reason. The federally assisted construction contractor agrees that (except where obtained identical certification from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the equal opportunity clause, and that he will retain such certification in his files.

CERTIFICATION: The information above is true and complete to the best of my knowledge and belief.

\_\_\_\_\_  
Name and Title of Signer (please type)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

NOTE: The penalty for making false statements in offers is prescribed in 18 USC 1001.

I. CONTRACT AND BONDS

If written notice of acceptance of this bid is mailed, telephoned, or delivered to the undersigned within sixty (60) days after the date of opening the bids, or at any time prior to the bid being withdrawn by the offeror, the undersigned agrees that he will execute and deliver a contract in the form required by the Contract Documents, in accordance with the bid as accepted and that he will give performance bond as specified, with good and sufficient surety or sureties acceptable to the Owner, within ten (10) days after the notice of award, exclusive of the day of notice.

Undersigned further agrees that bid deposit in the amount of 5% of Base Bid, plus Additive Alternates, accompanying this bid is left in escrow with the Owner, and that if undersigned fails to deliver said documents within ten (10) days after written notice of award of contract to him, shall be forfeited. The bid deposit shall be returned after the Contract Documents have been accepted by the Owner.

J. BID WITHDRAWAL

This bid may be withdrawn at any time prior to the scheduled time for the opening of bids, or any authorized postponement thereof.

K. OWNER'S RIGHT TO REJECT BIDS

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

Respectfully submitted,

Name of Firm \_\_\_\_\_

By \_\_\_\_\_

Title \_\_\_\_\_

Address \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Telephone \_\_\_\_\_

State of Washington  
 Contractor's Number \_\_\_\_\_

IRS Employer  
 Identification Number \_\_\_\_\_

FORM OF BID - 7

NOTE: If bidder is a corporation, write state of incorporation, and if a partnership, give full name and address of all partners below:

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CAUTION: Do not include any bids for other work in the envelope.

## MINORITY BUSINESS ENTERPRISE REGISTRATION FORMS

Full Legal Name of Business: \_\_\_\_\_

Street Address: \_\_\_\_\_ P.O. Box No.: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Telephone No.: \_\_\_\_\_

**Type of Organization (Check One)**

Individual Owner <input type="checkbox"/>	Partnership <input type="checkbox"/>	How Long in Business
Joint Venture <input type="checkbox"/>	Corporation, incorporated under the Laws of the State of _____	

**Names of Officers, Owners or Partners**

President	Vice President	Secretary
Treasurer	Owners or Partners	

### Minority Category

Category	Percentage of Ownership	Male	Female
Black	_____	_____	_____
Asian	_____	_____	_____
Hispanic	_____	_____	_____
Native American	_____	_____	_____
Eskimo	_____	_____	_____
Aleut	_____	_____	_____
White Female	_____	_____	_____

Give a brief summary of the nature of your business:

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---

Number of Employees: Full-time \_\_\_\_\_ Part-time \_\_\_\_\_

Indicate amount of gross receipts during the past year:

Under \$50,000 _____	\$50,000 - \$100,000 _____
\$100,000 - \$150,000 _____	Over \$150,000 _____

Contractor's Washington State License Number: \_\_\_\_\_

# CONTRACTOR'S DECLARATION OF MINORITY/WOMEN'S BUSINESS (M/WB) SUBCONTRACTING

Pursuant to Ordinance No. 5983, the subcontractors/suppliers (or substitute minority/women's businesses) listed on this form will be used on this contract.

To comply with King County Ordinance No. 5983, this form must be submitted with the bid, except for construction contracts when the form must be submitted no later than the close of the first King County business day after the bid opening.

Firm Name: \_\_\_\_\_ Telephone: \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_

Contract Amount: \_\_\_\_\_ Bid No. \_\_\_\_\_

M/WB SUBCONTRACTOR'S/SUPPLIERS NAME, ADDRESS, PHONE NUMBER	OWNERSHIP TYPE		TYPE OF WORK	AMOUNT OF BID
	MINORITY *( )	WOMEN ( )		

\*For the purposes of this report, minority or women's business means a business, either incorporated or unincorporated, in which a minority group member or a woman or women owns at least a 51% interest and has commensurate control over management interest in capital and profit or loss.

PERFORMANCE BOND

(COMPANY NAME)

KNOW ALL MEN BY THESE PRESENTS:

That we, \_\_\_\_\_ (Principal)

and \_\_\_\_\_ (Surety)

a corporation legally doing business in the State of Washington, are held and firmly bound and obligated unto the State of Washington and King County in the sum of \_\_\_\_\_

Dollars, for the payment, of which sum we do bind ourselves, and each of our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

This bond is executed in pursuance of Chapter 39.08, Revised Code of Washington.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH, THAT Whereas the Principal entered into a certain contract with KING COUNTY, dated the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, for \_\_\_\_\_

which contract and specifications are incorporated herein by this reference,

NOW, THEREFORE, if the Principal shall faithfully perform all the provisions of such contract and pay all laborers, mechanics and subcontractors and materialmen, and all persons who shall supply such person or persons, or subcontractors, with provisions and supplies for the carrying on of such work, then this obligation is void; otherwise to remain in full force and effect.

Provided, however, that the conditions of this obligation shall not apply to any money loaned or advanced to the Principal or to any subcontractor or other person in the performance of any such work.

Signed and Sealed this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_.

Principal \_\_\_\_\_

Surety \_\_\_\_\_

By \_\_\_\_\_  
Name \_\_\_\_\_

By \_\_\_\_\_  
Attorney-in-fact \_\_\_\_\_

Title \_\_\_\_\_

Approved as to Form:

By \_\_\_\_\_  
Deputy Prosecuting Attorney



PAYMENT BOND

(COMPANY NAME)

KNOW ALL MEN BY THESE PRESENTS:

That we, \_\_\_\_\_,  
as Principal, and \_\_\_\_\_,  
a corporation organized and existing under and by virtue of the laws of the  
State of \_\_\_\_\_, and legally doing business in the State of  
Washington, as Surety, are held and firmly bound and obligated unto the State  
of Washington, in the full and just sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_)  
lawful money of the United States, for the payment of which sum well and truly  
to be made, we do bind ourselves, our and each of our heirs, executors and  
administrators, successors and assigns, jointly and severally, firmly by these  
presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH, That whereas the Principal entered  
into a certain contract with \_\_\_\_\_

Dated the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, for \_\_\_\_\_

NOW, THEREFORE, if the Principal shall faithfully pay all debts incurred while  
performing the conditions of such contract, for materials, supplies, labor,  
services and rentals, then this obligation is void; otherwise to remain in full  
force and effect.

In no way shall the Owner, King County, be held responsible for any obligations  
of the Principal for debts incurred through such contract.

Signed and Sealed this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_.

Countersigned: \_\_\_\_\_ (Seal)

Principal

\_\_\_\_\_  
Surety (Seal)

Approved as to Form:

By \_\_\_\_\_

By \_\_\_\_\_  
Attorney-in-Fact

By \_\_\_\_\_

# CERTIFICATE OF INSURANCE

This is to certify to the County of King, Seattle, Washington, that the following policies are in force for:

Name of Insured \_\_\_\_\_

Address \_\_\_\_\_

To be returned to: King County Purchasing Agency, 620 King County Admin.  
Bldg. Seattle, WA. 98104, Telephone - 344-4210

Contract Title and/or Description of Job \_\_\_\_\_

Contract No. \_\_\_\_\_

COMPREHENSIVE LIABILITY  
including General Liability  
and Automobile Liability

\$1,000,000.00 Combined Single Limit

King County, its officials and employees are named as additional insureds for this project only.

The Following Special Coverages are included:

1) Broad Form Property Damage Including Care,  
Custody and Control Coverage

YES XX NO \_\_\_\_\_

2) Blanket Broad Form Contractual

YES XX \_\_\_\_\_

3) Products - Completed Operations

YES XX \_\_\_\_\_

4) Stop-Gap - Employers Contingent Liability

YES XX NO \_\_\_\_\_

5) Explosion, Collapse, Underground Damage

YES XX NO \_\_\_\_\_

6) Contractor's Protective

YES XX \_\_\_\_\_

7) Non-Owned and Hired Car Coverage

YES XX \_\_\_\_\_

In the event of cancellation of or material change in the coverage provided, thirty (30) days written notice will be furnished the County of King prior to date of cancellation or change..

Insurance Company(ies)

Policy No.

Effective

Expires

Name of Agency: \_\_\_\_\_

Address: \_\_\_\_\_ Tel. \_\_\_\_\_

AUTHORIZED REPRESENTATIVE

Workman's Compensation - STATE OF WASHINGTON Account No.

The undersigned hereby certifies that his operations are covered by  
Washington State Compensation Fund.

\_\_\_\_\_  
Signature of Contractor

Revised

KCSlip4 37124

SEA403669

# SAMPLE

CONTRACT NO. \_\_\_\_\_

THIS AGREEMENT, Made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, between KING COUNTY, State of Washington, hereinafter called the County, under the authority of Title 36, Revised Code of Washington and particularly RCW Ch. 36.80 and Title 39, Revised Code of Washington, and \_\_\_\_\_ for itself, its heirs, executors, administrators, successors and assigns, hereinafter called the Contractor.

WITNESSETH:

That in consideration of payments, covenants, and agreements, hereinafter mentioned, to be made and performed by the parties hereto, the parties hereto covenant and agree as follows:

DESCRIPTION OF WORK:

1. The Contractor shall do all work and furnish all tools, materials and equipment necessary to complete work consisting of the base bid for:

Contract Amount	\$ _____
. % Washington State Sales Tax	\$ _____
Total Contract with Sales Tax	\$ _____

in accordance with and as described in the attached plans and specifications of Bid No. \_\_\_\_\_ and in full compliance with the terms, conditions and stipulations herein set forth and attached now referred to and by such reference incorporated herein and made a part thereof as fully for all purposes as if here set forth at length, and shall perform any alterations in or additions to the work covered by this contract and every part thereof.

The Contractor shall provide and be responsible for the expense of all materials, labor, cartage, tools, implements and conveniences and things of every description that may be requisite for the transfer of materials and for construction and completing the work provided for in this contract and every part thereof.

2. The County hereby promises and agrees with the Contractor to employ, and does employ the Contractor to provide the materials and to do and cause to be done the above-described work and to complete and finish same according to the attached plans and specifications and the terms and conditions herein contained, and hereby contracts to pay for the same according to the attached specifications and proposal hereto attached, at the time and in the manner and upon the conditions provided for in this contract and every part thereof.

The County further agrees to employ the Contractor to perform any alterations or additions to the work covered by this contract and every part thereof and any force account work that may be ordered and to pay for the same under the terms of this contract and the attached plans and specifications.

# SAMPLE

SAMPLE

3. The Contractor agrees to protect and save King County, its elected and appointed officials and employees, including the King County Design Commission, harmless from and against all claims, demands and causes of action of any kind or character, including the cost of defense thereof, arising in favor of the Contractor's employees or third parties in connection with Contractor's activities on this project, except when such fault is solely and entirely the fault of King County or its above-named officials and employees.

4. The Contractor, for himself and for his heirs, executors, administrators, successors and assigns, does hereby agree to the full performance of all the covenants herein contained upon the part of the Contractor.

5. CANCELLATION OF CONTRACT FOR VIOLATION OF STATE POLICY:

This contract, pursuant to RCW 49.28.050 and 49.28.060, may be cancelled by the officers or agents of the owner authorized to contract for or supervise the execution of such work, in case such work is not performed in accordance with the policy of the State of Washington, relating to such work.

6. It is further provided that no liability shall attach to the County by reason of entering into this contract, except as expressly provided herein.

IN WITNESS WHEREOF the parties hereto have caused this agreement to be executed the day and year first hereinabove written.

CONTRACTOR:

Registration No. \_\_\_\_\_

\_\_\_\_\_  
King County Executive

\_\_\_\_\_  
President

Approved on \_\_\_\_\_

\_\_\_\_\_  
Secretary

Approved as to Form:

By: \_\_\_\_\_

Foregoing contract approved and  
ratified:

Date: \_\_\_\_\_

\_\_\_\_\_  
19\_\_\_\_

\_\_\_\_\_  
Surety

By: \_\_\_\_\_

\_\_\_\_\_  
Attorney-in-Fact

Form 00277.100  
Revised 4/4/77

SAMPLE

CERTIFICATE OF COMPLIANCE

No final payment shall be made until the Contractor shall file with King County, prior to acceptance of the work, a Certification of Compliance in form substantially as follows:

I (we) hereby certify that all work has been performed and materials supplied in accordance with the plans, specifications and contract documents for           (name of project)          , and that:

- (a) Not less than the prevailing rates of wages as ascertained by the governing body of the contracting agency has been paid to laborers, workmen and mechanics employed on this work;
- (b) There have been no unauthorized substitutions of sub-contractors; nor have any subcontracts been entered into without the names of the subcontractors having been submitted to the Architect prior to the start of such sub-contracted work;
- (c) No subcontract was assigned or transferred or performed by any subcontractor other than the original subcontractor, without prior notice having been submitted to the Architect together with the names of all subcontractors;
- (d) All claims for material and labor and other services performed in connection with the contract documents have been paid;
- (e) All moneys due the State Industrial Accident Fund, the State Unemployment Compensation Trust Fund, the State Department of Revenue, hospital associations and/or others have been paid;
- (f) The nature and source of all off-shore items in excess of Two Thousand Five Hundred Dollars (\$2500.00) utilized in the performance of this project have been reported;
- (g) All provisions of nondiscrimination as called for in the contract documents have been complied with.

\_\_\_\_\_  
Contractor

MINORITY AND WOMEN'S BUSINESS PARTICIPATION  
AND AFFIRMATIVE ACTION FOR EMPLOYMENT  
(Set Aside)

It is the policy of King County to provide equal employment opportunities for minority group members and an equal opportunity for minority-owned businesses and women-owned businesses to participate in providing goods and services to King County. Following is a summary of the County's affirmative action and minority and women's business participation requirements. More detailed information and forms follow this summary.

I. General Requirements

King County has both an affirmative action program relating to employment and a minority/women's business participation policy relating to subcontractors and suppliers. By submitting this bid, the Contractor agrees to comply with the requirements of King County Ordinance No. 4528 (relating to discrimination and affirmative action in employment) and Ordinance No. 5983 (relating to the procurement of goods and services from minority and women's businesses). King County Ordinance No. 5983 and King County Ordinance No. 4528 are incorporated into this contract by reference, and a copy of Ordinance No. 4528 is included in these bid specifications. Summarization of the requirements of the above ordinances in these specifications does not relieve the Contractor of the obligation to meet all of the requirements of these ordinances. Failure to comply with any of the provisions or requirements of the above ordinances may be considered a breach of contract.

II. Minority and Women Owned Businesses (Subcontractors and Suppliers):

Requirements, instructions and submittals for Ordinance No. 5983.

A. Set Aside Requirements

Ordinance No. 5983 requires that for construction contracts which exceed Ten Thousand Dollars, contractors must meet the following subcontracting percentage set aside requirements:

1. Minority Business participation - 15%
2. Women's Business participation - 7%

A bid submittal which fails to meet the above set aside requirements for the Base Bid will be deemed nonresponsive.

Where the prime contractor submitting bids for this project is a minority or women's business, the percentage set aside requirements do not apply.

B. Contractor's Declaration of Minority/Women's Business Subcontracting

All bidders for contracts valued at Ten Thousand Dollars or more must submit the attached Contractor's Declaration of Minority/Women's Business Subcontracting form which identifies minority and/or women's businesses which are to be used in this contract and the amounts of the subcontracts involved. .

This form notifies King County of how the Bidder plans to comply with Ordinance No. 5983. The form must be submitted to the King County Purchasing Agency, Room 620 King County Administration Building, no later than the close of the business day following the bid opening, but may be submitted with the bid. If failure of bidders to submit the required Contractor's Declaration of Minority/Women's Business Subcontracting form prevents King County from awarding this contract to the lowest responsible bidder, such failure shall constitute grounds for forfeiture of the bid deposit to King County.

C. Other Requirements of Ordinance 5983

During the term of this contract, the Contractor must comply with, as to tasks and dollar amounts, all commitments made in its submittals for the use of minority/women's businesses. In the absence of a waiver, minority/women's businesses which for any reason no longer remain associated with the contract or the Contractor, shall be replaced with other certified minority/women's businesses.

This contract prohibits any agreements between a Contractor and a minority/women's business in which the minority/women's business promises not to provide subcontracting quotations to other Contractors or potential Contractors.

Copies of Ordinance 5983 are available from the King County Purchasing Agency, Room 620, King County Administration Building.

III. Employment: Requirements, instructions and submittals for Ordinance No. 4528 (See attached complete copy of Ordinance No. 4528).

A. General

This ordinance requires that certain affirmative action steps be taken, and that reporting be done. King County's goals for the total hours of minority and women's employment in construction contracts include the following:

1. Hours worked by minority persons - 15 %
2. Hours worked by women - 6.9-%

B. Work Force Data

All Contractors entering into contracts with King County valued at One Thousand Dollars or more shall submit the attached Personnel Inventory Report which profiles the firm's minority and female employment data.

C. Compliance Affidavits and Union Statements

All Contractors entering into contracts with King County of more than Ten Thousand Dollars, shall submit the attached Affidavit and Certificate of Compliance, stating a commitment to the requirements of Ordinance No. 4528.

All Contractors entering into contracts with King County of more than Ten Thousand Dollars shall submit the attached Sworn Statement of Compliance with Ordinance No. 4528, evidencing union compliance with that ordinance.

Also attached is a sample cover letter to be sent by the Contractor to appropriate union or employee referral agency.

The above documents need not be submitted with the bid, but must be submitted prior to entering into a contract with King County.



IV. Summary of Mandatory Submittals and Procedures for Affirmative Action and Minority and Women's Business Participation.

- A. To be eligible to be considered for the award of this contract, bidders must return the following form no later than the close of the first King County business day after the bid opening:

Contractor's Declaration of Minority/Women's Business Subcontracting.

- B. To be eligible to be considered for the award of this contract, the successful bidder must also submit all of the following. Bidders may return the following three submittals with the bid, but must submit them prior to entering into a contract with King County for performance of the work.

1. Personnel Inventory Report Form;
2. Affidavit and Certificate of Compliance;
3. Sworn Statement of Compliance with Ordinance No. 4528 (Union Statement);

- C. The apparent successful bidder will be contacted by the King County Contract Compliance Officer as to actions that must be taken to receive approval of an affirmative action program and as to reporting functions that must be undertaken for this construction project.

- D. The attached list of Contract Agencies is offered by King County as a means of assisting bidders in contacting minority/women subcontractors and suppliers.

KING COUNTY ORDINANCE 4528

PROCEDURES

In accordance with King County Ordinance 4528, the apparent successful offeror will be contacted by the King County Contract Compliance Office to schedule an appointment so that your total Affirmative Action Program can be reviewed in accordance with the above mentioned Ordinance. Approval of your affirmative action program will be needed before contract award. Your review shall include, but not be limited to, the following areas:

- a) Personnel policies and procedures
- b) Recruiting of minorities and/or females
- c) Advertising
- d) Affiliate ownership
- e) Promotion standards
- f) Employment application criteria as it relates to the rules adopted by the Washington State Human Rights commission
- g) Training programs
- h) Contact and knowledge of minority community agencies providing supportive information and referral services
- i) Knowledge of Executive Order 11246
- j) Collective bargaining agreements

In addition, the successful offeror must submit the following forms prior to the contract award:

- 1. PERSONNEL INVENTORY REPORT. To be completed and signed.
- 2. AFFIDAVIT & CERTIFICATE OF COMPLIANCE. To be completed, signed and notarized.
- 3. SWORN STATEMENT OF COMPLIANCE (UNION FORM). If you have union employees, to be completed, signed by a union officer, and notarized.

For further information, call or contact:

Office of King County Contract Compliance  
280 King County Courthouse  
Seattle, WA 98104  
Telephone: (206) 344-2592

## ORDINANCE NO. 4528

AN ORDINANCE relating to discrimination and affirmative action in employment by county contractors, subcontractors or vendors; establishing policies; prescribing procedures, obligations, and requirements; prescribing penalties for noncompliance; and repealing Ordinance 198, Sections 1 through 13 and KCC-12.16.010 through KCC 12.16.160.

BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

### SECTION 1. DEFINITIONS

a. "Affirmative action" shall mean policies, procedures and programs designed to increase the representation of minorities and women in employment, applications for employment, and employment-related training programs (of minorities and women).

b. "Contractor" shall mean any person, firm, business, organization, company, partnership or corporation contracting to do business with King County, including, but not limited to, construction contractors, consultant contractors, providers of professional services, service agencies and vendors, but not including governmental agencies.

c. "Discrimination" shall mean differential treatment of or pursuit of policies or practices that have a disproportionate impact upon persons due to their creed, race, color, sex, age, marital status, national origin or the presence of any sensory, mental or physical handicap, unless such policies or practices are necessary for the performance of the job and no less discriminatory alternatives are possible.

d. "Employment" shall mean any and all terms and conditions and policies and practices of employment including, but not limited to, hiring, firing, upgrading, demotion, recruiting, transfer, lay-off, termination, pay rates and advertisement, hours and conditions of work.

e. "Minority" shall include Blacks, Asians, Pacific Islanders, American Indians, Alaska Natives, Hispanics and Mexican-Americans.

f. "Underrepresentation" shall mean presence in a contractor's work force of minorities and women in proportionate numbers lower than the goals established for the contractor's business under this ordinance.

g. "Vendors" shall mean any contractor selling or supplying materials, equipment and supplies to the County.

### SECTION 2. NONDISCRIMINATION

No contractor, subcontractor, or union doing business with the county, or furnishing workers or services in connection therewith, shall discriminate against any person on the basis of race, color, creed, sex, age, nationality, marital status or the presence of any sensory, mental or physical handicap, (provided that such handicap does not hinder the performance of the job) in employment, and no such contractor, subcontractor, or union shall violate any of the terms of Chapter 49.60 of the Revised Code of Washington, Title VII of the Civil Rights Act of 1964, or any other applicable federal, state or local law or regulation regarding nondiscrimination in employment.

### SECTION 3. GOALS AND TIMETABLES: AFFIRMATIVE ACTION REQUIRED.

a. Goals. The Executive shall annually set goals and timetables for minority and female employment by contractors doing business with King County, which goals shall be based on appropriate work force, demographic or other relevant data. These goals shall be set forth in the County's Affirmative Action Plan. Where, due to the nature of the business, the goals established for employment with King County in the County's Affirmative Action Plan are similarly appropriate and relevant for county contractors, those goals shall be adopted for compliance with this section. The setting, monitoring, and evaluating of a contractor's performance in attempting to meet goals shall be based on total hours of employment and training of minorities and women at the contractor's locations and establishments in King County or at the contractor's locations and establishments where work under contract with King County is being performed and contracted for when such occurs outside King County.

b. Guidelines. Guidelines for the determination of underrepresentation and employment goals will include, but not be limited to:

- (1) Minorities and women in the local labor market;
- (2) Minorities and women presently in the trade or job category;
- (3) Minorities and women seeking employment in or with the requisite skills for the trade or job category;
- (4) Minorities and women presently in apprenticeship or other programs in the trade or job category;
- (5) Minorities and women seeking admission to apprenticeship or other training programs in the trade or job category.

c. Affirmative Action Requirement. Where a contractor's employment statistics demonstrate that minorities and/or women are underrepresented in its work force in relationship to the goals established by the Executive, contractors, subcontractors, and unions doing business with the county, or providing workers or services in connection therewith, shall take affirmative action measures, as stipulated in this ordinance, to increase the representation of minorities and women at locations and establishments where projects and work are being done under contract with King County. Affirmative action steps shall be based on what is reasonably required to achieve employment goals which will cure underrepresentation. Underrepresentation of minorities and women will not itself be deemed a violation of this ordinance where reasonable affirmative action measures are adopted and are being implemented in good faith.

### SECTION 4. MINIMUM AFFIRMATIVE ACTION MEASURES

The evaluation of a contractor's compliance with this ordinance shall be based upon the contractor's effort to achieve maximum results from its affirmative action program. The contractor shall document these efforts and shall implement affirmative action steps at least as extensive as the following:

a. Reporting. Periodic reporting of employment statistics and affirmative action policies and procedures as may be requested by the King County Executive or his designee.

b. Policy Dissemination. Internal and external dissemination of the contractor's equal employment opportunity policy; posting of nondiscrimination policies and of the requirements of this ordinance on bulletin boards clearly visible to all employees; notification to each subcontractor, labor union or representative of workers with which there is a collective bargaining agreement or other contract, subcontract, or understanding, of the contractor's commitments under this ordinance; inclusion of the equal opportunity policy in advertising in the news media and elsewhere.

c. Recruiting. Adoption of recruitment procedures designed to increase the representation of women and minorities in the pool of applicants for employment; including, but not limited to, establishing and maintaining a current list of minority and female recruitment sources, providing these sources written notification of employment opportunities, and solicitation of bids for subcontracts from firms whose employment profile meets the affirmative action goals established under this ordinance.

d. Self-Assessment and Test Validation. Review of all employment policies and procedures, including review of tests, hiring and training practices and policies, performance evaluations, seniority policies and practices, job classifications and job assignments, to assure that they do not discriminate against, or have a discriminatory impact on minorities and women and validation of all tests and other selection requirements where there is an obligation to do so under state or federal law.

e. Record Referrals. Maintain a current file of applications of each minority and female applicant or referral for employment indicating what action was taken with respect to each such individual and the reasons therefor. Contact these people when an opening exists for which they may be qualified. Names may be removed from the file after three years have elapsed from their last application or referral.

f. Notice of Union Noncooperation. Provide immediate written notification to the Executive when the union or unions with which the contractor has a collective bargaining agreement, contract or understanding has not referred to the contractor a minority person or woman sent by the contractor, or when the contractor has other information that the union referral process has impeded the contractor's efforts to meet its obligations under this ordinance.

g. Supervisors. Ensure that all supervisory personnel understand and are directed to adhere to and implement the nondiscrimination and affirmative action obligations of the contractor under this ordinance. Such direction shall include, but not be limited to, adherence to, and achievement of, affirmative action policies in performance appraisals of supervisory personnel.

h. Training. Develop on-the-job training opportunities which expressly include minorities and women.

### SECTION 5. CONTRACT REQUIREMENTS

The county's policy, as stated in this ordinance, requiring nondiscrimination in contractor or subcontractor employment and affirmative action shall be included in all county contracts. Any violation of the specific provisions of this ordinance and of any term of the affidavit of compliance required herein, including reporting requirements, shall be deemed a violation of this ordinance. Any such violation shall be further deemed a breach of a material provision of the contract between the county and the contractor. Such breach shall be grounds for cancellation, termination, or suspension, in whole or in part, of the contract by the county, or for invoking the enforcement provisions of the contract of this ordinance providing for penalties, liquidated damages, or other remedies, and may result in ineligibility for further county contracts. PROVIDED, that underrepresentation of minorities and women and the failure or inability of any contractor to achieve employment goals will not be a violation where that contractor has adopted and pursued a reasonable affirmative action program in compliance with this ordinance. The burden is on the contractor to demonstrate its compliance with this ordinance.

### SECTION 6. PRE-CONTRACT QUALIFICATION

Prior to becoming eligible for all awards of any county contract, contractors must first be certified by the County Administrative Officer or his designee as having complied with the provisions of this section. The county shall not enter into a contract with nor receive products and services from an ineligible contractor.

a. Work Force Data. All contractors entering into contracts or agreements with King County valued at one thousand dollars or more shall submit to the County Executive a total personnel inventory employment profile providing minority and female employment data. The Executive may determine the form in which this data shall be provided.

b. Compliance Affidavits and Union Statements. All contractors entering into contracts with King County of more than ten thousand dollars, or

which in the aggregate result in yearly sales to King County of more than ten thousand dollars, shall submit an affidavit of compliance, in the form provided by the county, demonstrating their commitment to comply with the provisions of this ordinance, and shall further submit a signed statement of compliance from a union or employee referral agency. The affidavit of compliance shall set forth the contractor's specific employment goals, minimum affirmative action requirements, reporting requirements and other such provisions as the Executive deems necessary and appropriate for compliance with and enforcement of this ordinance; PROVIDED, that the affidavit of compliance shall not require actions or goals inconsistent with the standards, guidelines and affirmative action measures set forth in this ordinance; PROVIDED FURTHER, that in lieu of the affidavit the Executive may accept a statement pledging adherence to an existing contractor affirmative action plan where the provisions of the plan are found by the Executive to substantially fulfill the requirements of this ordinance.

c. Vendors, Yearly Renewals. Vendors who became qualified under paragraphs a and b of this section shall remain so qualified until October 31, of the year in which they were qualified and shall be entitled to bid and be considered for the sale of materials, supplies and equipment at any time during that year without requalification. Further, upon submittal of an updated employment profile, such vendor's qualification shall be extended from year to year.

During such time as a vendor remains continuously qualified under this ordinance to do business with King County, the affidavit of compliance initially submitted to gain qualification shall be deemed to be effective and in force without further renewal or resubmission. Should qualification lapse or be terminated at any time due to a failure to submit an annual employment profile or upon a finding of violation of this ordinance, the county having previously complied with notice of hearing provisions, a new affidavit of compliance and employment profile shall be required prior to vendor's being requalified.

#### SECTION 7. STATEMENTS FROM UNIONS

Contractors required to submit compliance affidavits to include a union statement from a union or worker referral agency shall do so on forms provided by the Executive. The statement shall be in writing, signed by the authorized officers or agents of all labor unions or agencies referring workers or providing or supervising apprenticeship or other training programs from whom the contractor obtains employees. The statement shall affirm that the signer(s)'s organization has no practices and policies which discriminate on the basis of race, color, creed, sex, age, marital status, the presence of any physical, mental or sensory handicap, or national origin, that the signer(s)'s organization will affirmatively cooperate in the implementation of the policies and provisions of this ordinance, and that the organization consents and agrees that recruitment, employment, and the terms and conditions of employment under all contracts with the county shall be in accordance with the purposes and provisions of this ordinance.

#### SECTION 8. SUBCONTRACTORS

For projects and contracts over one hundred thousand dollars, the prime contractor shall be required to submit to King County, along with its qualifying documents under this ordinance, employment profiles, affidavits of compliance, reports and union statements from its subcontractors in the same manner as these are required of the prime contractor. Reporting requirements of the prime contractor during the contract period will apply equally to all subcontractors. As a condition of their contract, prime contractors shall be responsible for both the submission of affidavits and reports and for requiring their subcontractors and vendors to employ racial minorities and women. Any violation of this ordinance or the requirements of the affidavit of compliance by the subcontractor will be deemed a violation by the prime contractor and subject to the sanctions and penalties set out in the contract and in this ordinance.

#### SECTION 9. COMPLIANCE MONITORING

The County Executive is authorized to contract with an appropriate agency to monitor compliance with this ordinance and to conduct such investigations as may be necessary to determine compliance on the part of any firm or organization with the requirements of this ordinance. It shall be the duty of each department responsible for and initiating contracts subject to this ordinance to assure that contractors are notified of their obligations hereunder. The County Administrative Officer or his designee shall have the direct responsibility and authority to insure that contractors are properly monitored and that each county department is in full compliance with the provisions of this ordinance.

#### SECTION 10. REPORTING REQUIREMENTS

The contractor will, upon request, furnish all information and reports as reasonably required by the Executive, and by any appropriate agency authorized under Section 9, to determine compliance with this ordinance, and the affidavit of compliance, and will permit access to its books, records and accounts for purposes of investigation to ascertain compliance with the nondiscrimination and affirmative action requirements of this ordinance. Unless otherwise required by law, all information, data or records obtained pursuant to the monitoring and investigation activities authorized hereunder shall be kept confidential by the county or authorized agency, except that the county may release such information when requested to do so in cooperation with state and federal agencies administering and enforcing state and federal laws against discrimination.

#### SECTION 11. NOTICE AND HEARING

Upon receipt of an allegation that any contractor or vendor has violated any provision of this ordinance, or if a violation is discovered from information gained through compliance monitoring, the County Executive or authorized agency will conduct an investigation. If it appears that a violation has occurred, the County Executive or his designee will, upon ten days' written notice to the contractor, conduct a hearing to determine whether a violation has occurred. The notice shall contain a brief statement of the allegations and the reasons that a violation is believed to have occurred. The hearing shall be recorded and each party shall have the right to call and examine witnesses, to produce documentary and physical evidence, to cross-examine witnesses and to be represented by anyone of his choice lawfully permitted to do so. The parties shall include the complainant, if any, the contractor or vendor, and a representative of the Executive or the agency conducting the investigation. The Executive may suspend progress payments on a contract or contracts pending the outcome of the hearing. Unless otherwise agreed to by all parties, the hearing shall be commenced no later than twenty-one days after service of a notice of violation.

#### SECTION 12. SANCTIONS

After the hearing, the Executive or hearing examiner shall make written findings and conclusions and may undertake one of the following:

- Dismissal of the complaint when a violation is found not to have occurred;
- Suspension or cancellation of the contract in part or in whole;
- Disqualification of the contractor;
- Exclusion from future contracts or vending until demonstration of compliance;
- Liquidated damages of up to ten percent of the contract amount;
- Enforcement of any provisions of the contract providing other remedies, such as penalties or liquidated damages for violation of contractual provisions, or enforcement of any other remedy available at law to the County.

#### SECTION 13. ADDITIONAL SANCTIONS

Any person, firm, corporation, business, union, or organization that prevents or interferes with a contractor's efforts to comply with the requirements of this ordinance shall be subject to a civil penalty of five hundred dollars for each occurrence, the county having previously complied with the notice and hearing provisions of this ordinance.

#### SECTION 14. ADMINISTRATIVE RULES OF PRACTICE AND PROCEDURE

Administrative practices and procedures required to fully implement the provisions of this ordinance shall be promulgated and filed with the Clerk of the Council in the manner prescribed in KCC 2.98.

#### SECTION 15. SEVERABILITY

Should any section, subsection, paragraph, sentence, clause, or phrase of this ordinance be declared unconstitutional or invalid for any reason, such decision shall not affect the validity of the remaining portions of this ordinance.

#### SECTION 16.

Ordinance 198, Sections 1 through 13 and KCC 12.16.010 through KCC 12.16.160 are each hereby repealed.

#### SECTION 17. 1979 GOAL

The county's 1979 goal for minority and female employment within contractors doing business with the county shall be:

- Vendor and Service Contracts: Of the total hours of employment deemed necessary for an employer to complete contracted work for King County eleven percent shall have been accomplished by minority employees and thirty-five percent shall have been accomplished by female employees.
- Construction Contracts: Of the total number of hours of employment deemed necessary for an employer to complete contractual work for King County thirteen percent shall have been accomplished by minority employees and five percent shall have been accomplished by female employees.

PROVIDED THAT, the 1980 goal and the goal for all ensuing years thereafter shall be stated in the County's Affirmative Action Plan as approved by the Council.

INTRODUCED AND READ for the first time this 30th day of July, 1979.  
PASSED this 15th day of October, 1979.  
KING COUNTY COUNCIL  
KING COUNTY, WASHINGTON

Chairman  
ATTEST:

Deputy Clerk of the Council

APPROVED this 23rd day of October, 1979.

King County Executive



King County Purchasing Agency  
620 King County Administration Building  
500 Fourth Avenue  
Seattle, Washington 98104  
(206) 344-4210

# CONSTRUCTION PERSONNEL INVENTORY REPORT

LEGAL NAME OF BUSINESS \_\_\_\_\_ TELEPHONE NO. \_\_\_\_\_

ALSO DOING BUSINESS AS (DBA) \_\_\_\_\_

ADDRESS \_\_\_\_\_ CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

ARE YOU UNIONIZED OR DO YOU USE AN EMPLOYEE REFERRAL AGENCY: YES \_\_\_\_\_ NO \_\_\_\_\_ If yes, list the unions or employee referral agencies with whom you do business: \_\_\_\_\_

If you expect to do more than \$10,000 worth of business with King County, the unions or employee referral agencies must submit a statement of compliance.

DO YOU HAVE ANY EMPLOYEES? YES \_\_\_\_\_ NO \_\_\_\_\_ If yes, list on the Employment Data Chart below the total number of employees for all businesses located in (1) King County. If none, list the total number of employees for all businesses located in (2) Washington State. If none, list the total number of employees for all businesses located in the (3) United States. Indicate which locale (1, 2, 3) report covers: \_\_\_\_\_

EMPLOYMENT DATA	WHITES		BLACKS		ASIANS		NATIVE AMERICANS		HISPANICS		MINORITY SUB-TOTAL	
JOB CATEGORIES	M	F	M	F	M	F	M	F	M	F	M	F
Managerial												
Professional												
Technical												
Clerical												
Sales												
Service												
Labor												
On-Job Trainees												
Apprentice												
*Skilled Craft												
SUB-TOTAL												

\*Journey worker: List by classification on reverse, e.g., carpenter, plumber, etc.

TOTAL NUMBER OF EMPLOYEES REPORTED ABOVE: \_\_\_\_\_ (If no employees, write "0"). THIS REPORT COVERS BUSINESS LOCATION(S) IN (KING COUNTY, WASHINGTON STATE, OTHER STATES) \_\_\_\_\_ FOR THE PAYROLL PERIOD (MONTH, DAY, YEAR). \_\_\_\_\_ IRS EMPLOYER IDENTIFICATION NUMBER \_\_\_\_\_

SUBMITTED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_  
NAME (Print or Type)

10/82

DO NOT WRITE BELOW THIS LINE

AA#	Vendor #	Certified Stamp	CS	SM	SF	M	PST	TCC	IVF	FPST

KCSlip4 37135

SEA403680

**SUPPLEMENTAL FORM**

Attach supplemental forms as necessary to report the total work force.

**TITLE**

KCSlip4 37136

SEA403681

**AFFIDAVIT AND CERTIFICATE OF COMPLIANCE  
WITH KING COUNTY AFFIRMATIVE ACTION ORDINANCE NO. 452B**

**TITLE:** \_\_\_\_\_ **BID NO.:** \_\_\_\_\_

**DESIGNATED CONTRACTOR:** \_\_\_\_\_  
Company Name

STATE OF WASHINGTON )  
COUNTY OF KING ) SS

The undersigned, being first duly sworn, on oath states on behalf of the Contractor as follows:

Definitions: "Contractor" shall mean any contractor, vendor or consultant who supplies goods and/or services. "Contract" shall mean any contract, purchase order or agreement with King County Government, hereinafter called the County.

A. Contractor recognizes that discrimination in employment is prohibited by federal, state and local laws. Contractor recognizes that in addition to refraining from discrimination, affirmative action is required to provide equal employment opportunity. Contractor further recognizes that this affidavit establishes minimum requirements for affirmative action and fair employment practices and implements the basic nondiscrimination provisions of the general contract specifications as applied to service, consultant, vendor or construction contracts exceeding \$10,000. Contractor herein agrees that this affidavit is incorporated as an addendum to its general contract, and recognizes that failure to comply with these requirements may constitute grounds for application of contract default remedies as set forth in the general specifications, King County Ordinance 452B and this affidavit, PROVIDED FURTHER, that in lieu of the affidavit the Executive may accept a statement pledging adherence to an existing contractor affirmative action plan where the provisions of the plan are found by the Executive to substantially fulfill the requirements of this ordinance.

B. Contractor shall give notice to their supervisors and employees of the requirements for affirmative action to be undertaken prior to the commencement of work.

C. The following named person has been designated to represent the Contractor and to be responsible for securing compliance with and for reporting on the affirmative actions taken.

**AFFIRMATIVE ACTION REPRESENTATIVE:**

**NAME:** \_\_\_\_\_

D. Contractor will cooperate fully with the King County Contract Compliance Office and appropriate County agents while making every reasonable "good faith" effort to comply with the affirmative action and nondiscrimination requirements set forth in this sworn statement and in Ordinance 452B.

E. Reports: The Contractor agrees to complete and submit with this affidavit such additional reports and records that may be necessary to determine compliance with the affidavit and to confer with the County Compliance Officer at such times as the County shall deem necessary. The information required by Ordinance 452B includes but is not limited to the following reports and records:

1. Personnel Inventory Report: This report shall include a breakdown of the employer work force showing race, sex, ethnic and other minority data.
2. Monthly Utilization Report: This report, required for every construction contract, shall provide the number of hours of employment for minority and female employees by craft and category.
3. Statement from Union Or Worker Referral Agency: This statement affirms that the signee(s)'s organization has no practices and policies which discriminate on the basis of race, color, creed, sex, age, marital status, etc.
4. Certified Weekly Payroll: This report is required from every construction contractor, subcontractor, and any lower tier subcontractor for each work week from the time work starts on the project until completion.

The information required in this section shall be submitted on forms provided by the County unless otherwise specified.

F. Subcontractors: For projects and contracts over one hundred thousand dollars (\$100,000.00) the prime-contractor shall be required to submit to the County, along with its qualifying documents under this ordinance, employment profiles, Affidavits of Compliance, Reports and Union Statements from its subcontractors, in the same manner as these are required of the prime-contractor. Reporting requirements of the prime-contractor during the contract period will apply equally to all subcontractors.

G. Employment Goals: The contractor will ensure that equal opportunity of employment for minorities and women results during the term of this contract and take every reasonable measure to achieve and maintain at all levels of workforce and management including subcontractors, employment goals as outlined in this section.

The evaluation of a construction contractor, subcontractor or lower tier subcontractor's performance in attempting to meet goals shall be based on total hours of employment and training of minorities and women at the contractor's location and establishments in King County or at the contractor's locations and establishments where work under contract with the County is being performed and contracted for when such occurs outside King County. The evaluation of a service, vendor or consultant contractor's performance shall be based on personnel profiles.

1. The goals for minorities and women are as follows:

	Minorities	Women
Construction Contractors	15%	6.9%
Vendors/Services	11%	35%

"Minority" is defined as Blacks, Asians or Pacific Islanders, American Indians or Alaskan Natives, and Hispanics.

H. Underrepresentation of Minorities and Women: Underrepresentation of minorities and women will not be deemed a per se violation of Ordinance 452B. Where a contractor's employment statistics demonstrate that minorities and/or women are underrepresented in its workforce in relationship to the goals set forth in Paragraph G. 1., the burden will be on the contractor to show that the minimum affirmative action requirements set forth below have been met and that reasonable "good faith" affirmative action plan in compliance with Ordinance 452B has been pursued.

I. **Minimum Affirmative Action Requirements:** Contractor agrees that failure to implement and/or maintain reasonable "good faith" efforts to achieve the goals set forth in Paragraph G. 1. will constitute a breach of this agreement. The evaluation of a contractor's compliance with this ordinance shall be based upon the contractor's effort to achieve maximum results from its affirmative action program. The contractor shall document these efforts and shall implement affirmative action steps at least as extensive as the following:

1. **Reporting:** Periodic reporting of employment statistics and affirmative action policies and procedures as may be requested by the King County Executive or designee.
2. **Policy Dissemination:** Internal and external dissemination of the contractor's equal employment opportunity policy; posting of nondiscrimination policies and of the requirements of this ordinance on bulletin boards clearly visible to all employees; notification to each subcontractor, labor union or representative of workers with which there is a collective bargaining agreement or other contract, subcontract, or understanding, of the contractor's commitments under this ordinance; inclusion of the equal opportunity policy in advertising in the news media and elsewhere.
3. **Recruiting:** Adoption of recruitment procedures designed to increase the representation of women and minorities in the pool of applicants for employment; including, but not limited to, establishing and maintaining a current list of minority and female recruitment sources, providing these sources written notification of employment opportunities, and solicitation of bids for subcontracts from firms whose employment profile meets the affirmative action goals established under this ordinance.
4. **Self-Assessment and Test Validation:** Review of all employment policies and procedures, including review of tests, hiring and training practices and policies, performing evaluations, seniority policies and practices, job classifications and job assignments, to assure that they do not discriminate against, or have a discriminatory impact on, minorities and women and validation of all tests and other selection requirements where there is an obligation to do so under state or federal law.
5. **Record Referrals:** Maintain a current file of applications of each minority and female applicant or referral for employment indicating what action was taken with respect to each such individual and the reasons therefor. Contact these people when an opening exists for which they may be qualified. Names may be removed from the file after three years have elapsed from their last application or referral.
6. **Notice of Union Noncooperation:** Provide immediate written notification to the Executive when the union or unions with which the contractor has a collective bargaining agreement contract or understanding has not referred to the contractor a minority person or woman sent by the contractor, or when the contractor has other information that the union referral process has impeded the contractor's efforts to meet its obligations under this ordinance.
7. **Supervisors:** Ensure that all supervisory personnel understand and are directed to adhere to and implement the non-discrimination and affirmative action obligations of the contractor under this ordinance. Such direction shall include, but not be limited to, adherence to, and achievement of, affirmative action policies in performance appraisals of supervisory personnel.
8. **Training:** Develop on-the-job training opportunities which expressly include minorities and women.

Where a contractor's employment statistics demonstrate that minorities and/or women are underrepresented, failure to follow any of the requirements of Paragraph I (1-8) shall be prima facie evidence of noncompliance with this agreement.

J. Contractor agrees in all its employment policies and practices to refrain from discrimination against any person on the basis of race, color, creed, national origin, sex, age, marital status, or the presence of any mental, physical or sensory handicap, including but not limited to hiring, firing, lay-off, transfer, promotion or demotion, job assignment wages, and other terms and conditions of state and local rules, laws or ordinances and regulations regarding any such discrimination.

K. Contractor agrees to provide reasonable access upon request to the premises of all places of business and employment, relative to work undertaken in this contract, and to records, files, information and employees in connection therewith, to the County Contract Compliance Officer or agent for purposes of reviewing compliance with the provisions of this affidavit and agrees to cooperate in any compliance review.

L. Should the Contract Compliance Office find, upon complaint, investigation or review, the Contractor not to be in good faith compliance with the provisions contained in this affidavit, it shall notify the County and the contractor in writing of the findings, fully describing the basis of noncompliance. Contractor may request withdrawal of such notice of noncompliance at such time as the compliance officer in writing has notified the contractor and the County that the noncompliance has been resolved.

M. The contractor agrees that any violation of the specific provisions of the ordinance and of any term of the affidavit of compliance required herein, including reporting requirements, shall be deemed a violation of the ordinance. Any such violation shall be further deemed a breach of a material provision of the contract between the County and the contractor. Such breach shall be grounds for implementation of any sanctions provided for in King County Ordinance 4528, including but not limited to cancellation, termination or suspension, in whole or in part, of the contractor by the County; liquidated damages; or disqualification of the contractor, PROVIDED, that the implementation of any sanctions is subject to the notice and hearing provisions of § 11 of King County Ordinance 4528.

N. Contractor recognizes that it is bound by all provisions of King County Ordinance 4528 and acknowledges receipt of a copy thereof.

DESIGNATED CONTRACTOR: \_\_\_\_\_  
Company Name

ADDRESS: \_\_\_\_\_  
Street City State Zip

AUTHORIZED SIGNER \_\_\_\_\_  
Signature Title

NAME: \_\_\_\_\_  
Print or Type

SUBSCRIBED AND SWORN TO before me  
this \_\_\_\_\_ day of \_\_\_\_\_ 19 \_\_\_\_\_

APPROVED BY: \_\_\_\_\_  
King County Compliance Officer

Notary Public in and for the State of Washington  
residing at \_\_\_\_\_  
Date Telephone Number



SAMPLE

SAMPLE LETTER TO UNION OR EMPLOYEE REFERRAL AGENCY

SAMPLE

Dear \_\_\_\_\_

King County Ordinance 4528 and the supporting affidavit and Certificate of Compliance require that all contractors doing business with King County in an aggregate amount of \$10,000 or more per year submit a statement of compliance from your union.

The statement of compliance is to assure that your union is in compliance with Ordinance 4528 and does not "discriminate against any person on the basis of race, color, creed, sex, age, nationality, marital status or the presence of any sensory, mental or physical handicap" in employment or referral for employment.

In an effort to comply with King County Ordinance 4528, we are enclosing the attached county form for signature by an authorized officer of your union. In the event that you refuse to sign this statement of compliance, our Compliance Report shall so certify, and shall set forth what efforts have been made to secure the signing of this agreement.

Once this agreement has been signed and submitted to King County, it will be valid for a period of one year, and applicable to all county contracts for a period of one year. If you have previously signed a union statement for King County during this calendar year, please indicate in writing.

Your written response is required in this office on or before \_\_\_\_\_, 19\_\_.

Your cooperation in this matter is greatly appreciated.

BY:

TITLE:

DATE:

SAMPLE

SAMPLE

SWORN STATEMENT OF COMPLIANCE WITH  
ORDINANCE 4528  
(Union or Employee Referral Agency Statement)

The undersigned, being first duly sworn on oath, states as follows:

A. That I am the authorized officer of \_\_\_\_\_  
and am signing this statement on behalf of the organization.

B. That the organization recognizes that King County Ordinance 4528 prohibits discrimination in both employment and referrals for employment on the basis of race, color, creed, sex, age, nationality, marital status or the presence of any sensory, mental or physical handicap except where such sensory, mental or physical handicap hinders job performance.

C. That the organization agrees to adhere to a policy of nondiscrimination and agrees to affirmatively cooperate in the implementation of the policies and provisions of King County Ordinance 4528. The organization further agrees that recruitment, employment, referrals for employment, and the terms and conditions of employment under all contracts with King County shall be in accordance with the purposes and provisions of King County Ordinance 4528.

This statement is valid for a period of one year.

\_\_\_\_\_  
Authorized Representative

\_\_\_\_\_  
Union/Employee Referral Agency

\_\_\_\_\_  
Phone Number

\_\_\_\_\_  
Address

By: \_\_\_\_\_  
Signature

\_\_\_\_\_  
City, State, Zip Code

\_\_\_\_\_  
Title

Subscribed and Sworn To Before me this  
day of \_\_\_\_\_, 198\_\_.

NOTARY PUBLIC in and for the State of  
Washington, residing at \_\_\_\_\_.

SAMPLE

## CONTACT AGENCIES

The following agencies may be contacted for assistance in obtaining Minority subcontractors and suppliers:

Associated Women Contractors  
P.O. Box 9872  
Seattle, WA 98109  
(206) 285-9197

Compadres Business League  
1106 B-West Lincoln Avenue  
Yakima, WA 98902  
(509) 575-7887 or 575-7888  
Attn: Juan Migel Avena, Acting Director

Office of King County Contract Compliance  
280 King County Courthouse  
Seattle, WA 98104  
(206) 344-6033

Pierce County Minority Contractors Association  
1036 South Sprague Street  
Tacoma, WA 98405  
(206) 383-5053

Seattle Human Rights Dept.  
Compliance Division  
105 - 14th Avenue  
Seattle, WA 98122  
(206) 625-4384

Small Business Administration  
Region X  
710 Second Avenue  
Seattle, WA 98104  
(206) 442-5676  
Attn: Minority Business Administrator

Revised 4-4-B4

KCSlip4 37141

SEA403686

# GENERAL CONDITIONS

<u>SECTION</u>	<u>INDEX</u>	<u>PAGE</u>
1	STANDARD SPECIFICATIONS	1
2	DEFINITIONS	1
3	ENGINEER	1
4	WORDING OF THESE SPECIFICATIONS	1
5	SPECIFICATIONS AND STANDARDS BY REFERENCE	2
6	CONTRACT DOCUMENTS	2
7	INTERPRETATION OF DOCUMENTS	2
8	CONFORMITY OF PLANS AND SPECIFICATIONS	2
9	ADDITIONAL INSTRUCTIONS	3
10	LABOR AND MATERIALS	3
11	PERMITS AND LICENSES	3
12	EMPLOYMENT OF STATE RESIDENTS - RCW 39.16	4
13	PUBLIC WORKS - WAGES	4
14	CONTRACTOR'S INSURANCE	5
15	PROSECUTION AND PROGRESS	5
16	SOURCE OF MATERIAL	5
17	CERTIFICATION OF MANUFACTURED MATERIALS	5
18	OFF-SHORE ITEMS	6
19	WORK AREA	6
20	MATERIAL AND EQUIPMENT STOCKPILE LOCATION	6
21	BARRICADES AND SIGNS	6
22	INSPECTION BY OWNER'S ENGINEER	6
23	CONTRACTOR'S REPRESENTATIVE OF THE WORK	7
24	USE AND OCCUPANCY PRIOR TO COMPLETION	7
25	CHANGES IN PLANS OR QUANTITIES	7
26	CHARGES IN WORK AND EXTRA WORK	7
27	DEFECTIVE WORK	8
28	ASSIGNMENT OF CONTRACT AND SUBLETTING	8
29	DECISION OF THE ENGINEER FINAL	8
30	NOTICE AND SERVICE THEREOF	9
31	STATE SALES TAX	9
32	PAYMENT	9
33	RETAINED PERCENTAGE FUNDS RELEASE	9
34	HOLD HARMLESS	10

## GENERAL CONDITIONS

Any provisions of this contract in conflict or inconsistent with the requirements of these General Conditions, except such provisions as are required by applicable law or regulations, shall be void to the extent of such conflict or inconsistency.

### SECTION 1 - STANDARD SPECIFICATIONS

The principal reference on this project is the "Standard Specifications for Road & Bridge Construction," issued by the Washington State Transportation Commission, Department of Transportation, 1980 edition and adopted by King County Council on May 26, 1981, hereafter cited as the "State Standard Specifications."

Copies of the State Standard Specifications are on file in the office of the County Road Engineer, Department of Public Works, 900 King County Administration Building, Seattle, Washington, where they may be examined and consulted by any interested party.

The State Standard Specifications, except as they may be hereafter modified or superceded by the Special Provisions, or Technical Specifications, shall govern all phases of work under this contract and they are by reference made an integral part of these Specifications and Contract as if herein fully set forth.

### SECTION 2 - DEFINITIONS

Wherever reference is made in these State Standard Specifications to the "Director", "Director of Highways" or "Engineer", such reference shall be construed to mean the County Road Engineer or his duly authorized assistants.

Wherever reference is made in these State Standard Specifications to the "Commission", "Washington State Highway Commission", "State" "Department" or "Department of Highways", such reference shall be construed to mean King County, Washington and its appropriate governing and administering agencies and departments.

### SECTION 3 - ENGINEER

The term Engineer as used in these specifications or in the State Standard Specifications, wherever they apply, refers to the King County Road Engineer who is in charge of this work. In his absence, the reference applies to the County Road Engineer's representative.

### SECTION 4 - WORDING OF THESE SPECIFICATIONS

These specifications are of the abbreviated or "streamlined" type and frequently include incomplete sentences. Words such as "the", "all", "shall", "the Contractor shall", "shall be" and similar mandatory phrases shall be supplied by inference in the same manner as they are in a note on the drawings. The Contractor shall provide all items, articles, materials, and operations listed, including all labor, materials, equipment and incidentals required for their completion.

GENERAL CONDITIONS - Continued

SECTION 5 - SPECIFICATIONS AND STANDARDS BY REFERENCE

Any material and/or procedure specified by reference to the number, symbol or title of a specific standard such as a commercial standard, Federal specification, a trade association standard, technical society standard, or other similar standard, shall comply with the requirements in the latest revisions thereof and any amendment or supplement thereto, in effect on the date of Invitation for Bids, except as limited to type, class or grade, or modified in the reference. The standards referred to, except as modified in the specification, shall have full force and effect as though printed in the specifications.

SECTION 6 - CONTRACT DOCUMENTS

The Contract Documents consist of:

- a. Invitation to Bid
- b. Instructions to Bidders
- c. Accepted Proposal
- d. General Conditions
- e. Contract
- f. Special Provisions
- g. Technical Specifications
- h. Performance Bond
- i. Plans

Items a. to g. inclusive, and Item i. shall form the contract.

SECTION 7 - INTERPRETATION OF DOCUMENTS

The documents forming the contract are complementary and what is called for by one shall be as binding as if it were called for by all. They are intended to include all details of labor and material reasonably necessary for the proper execution of the work. Should there be any discrepancy between the Technical Specifications and Plans, the Technical Specifications shall have precedence.

SECTION 8 - CONFORMITY OF PLANS AND SPECIFICATIONS

The work shall be done in strict conformity to the plans and specifications and to the exact lines and grades as fixed by the Engineer, and with such instructions as shall from time to time be given by the Engineer. The Contractor shall provide such assistance and materials as may be required by the Engineer for giving lines, grades, etc., and shall protect and preserve in their original positions all stakes, points, or marks for the work by the Engineer, and where the Engineer shall consider such stakes, points, or marks to have been unnecessarily destroyed, he may cause the expense of replacing them to be charged to the Contractor and the amount of such costs deducted from any moneys due or which may become due to the Contractor under the contract for this work.

GENERAL CONDITIONS - Continued

SECTION 9 - ADDITIONAL INSTRUCTIONS

In the event that it is found that the instructions and drawings contained in the contract documents are not sufficiently clear to permit the Contractor to proceed with the work, the Engineer shall either upon his own motion or upon request from the Contractor, furnish such additional written instructions together with such additional drawings as may be necessary. When such request is made by the Contractor it must be made in ample time to permit the preparation of the instructions and drawings by the Engineer before the construction of the work covered by them is undertaken. Such additional instructions and drawings shall not be inconsistent with the contract documents and shall have the same force and effect as it contained in the contract documents.

SECTION 10 - LABOR AND MATERIALS

The intent of the plans and specifications is to provide for the construction and completion in every detail of the work described therein and it is understood that the Contractor for all or any part will furnish all labor and materials, tools, equipment, transportation, and necessary supplies, such as may be reasonably required to execute the contract in a satisfactory and work-man-like manner, and in accordance with the plans, specifications and terms of the contract.

Unless otherwise specified all materials shall be new. All materials shall be of the best of the several kinds called for and it is intended that only the best methods and materials, as recognized by usage in first class work, shall be used. All workmanship shall be of the highest quality in every particular.

Immediately after the award of the contract, the Contractor shall furnish to the Owner's Engineer, King County Form No. KCE-11, Request for Approval of Material Sources. No materials may be used on the contract until the Contractor has received approval for the materials on the above King County Form (KCE-11).

SECTION 11 - PERMITS AND LICENSES

The Contractor shall procure all permits and licenses, pay all charges and fees and give all notices necessary and incident to the due and lawful prosecution of the work.

GENERAL CONDITIONS - Continued

SECTION 12 - EMPLOYMENT OF STATE RESIDENTS - R.C.W. 39.16

The first paragraph of Section 1-07.8 of the State Standard Specifications is hereby deleted and the following substituted therefor:

The law of this State provides:

In all contracts let by the State or any department thereof, or any county, city or town for the erection, construction, alteration, demolition or repair of any public building, structure, bridge, highway, or any other kind of public work or improvement, the contractor or subcontractor shall employ ninety-five percent or more bonafide Washington residents as employees where more than forty persons are employed, and ninety percent or more bonafide Washington residents as employees where forty or less persons are employed, except that any contractor or subcontractor may employ not more than five persons without regard to the residency requirements stated herein in the performance of any such contract: PROVIDED, that the State of the residence of the contractor or subcontractor provides reciprocal rights to Washington contractors or subcontractors. The contractor shall pay the standard prevailing wages for the specific type of construction as determined by the United States Department of Labor in the city or county where the work is being performed. The term "resident", as used in this chapter, shall mean any person who has been a bonafide resident of the State of Washington for a period of ninety days prior to such employment: PROVIDED, that in contracts involving the expenditure of federal-aid funds this chapter shall not be enforced in such manner to conflict with or be contrary to the federal statutes, rules and regulations prescribing a labor preference to honorably discharged soldiers, sailors and marines, or prohibiting as unlawful any other preference or discrimination among the citizens of the United States.

SECTION 13 - PUBLIC WORKS - WAGES

The prevailing rate of wage to be paid to all workmen, laborers, or mechanics employed in the performance of any part of this Contract shall be in accordance with the provisions of Chapter 39.12 RCW, as amended, and the rules and regulations of the Department of Labor and Industries. The rules and regulations of the Department of Labor and Industries and the schedule of prevailing wage rates for the locality or localities where this Contract will be performed as determined by the Industrial Statistician of the Department of Labor and Industries, are by reference made a part of this contract as though fully set forth herein.

The requirements for submitting the "Statement of Intent to Pay Prevailing Wages", the "Affidavit of Wages Paid" and the "Release for the Protection of Property Owners and General Contractor" shall be as stated in Section 1-07.9 and Section 1-07.10 of the State Standard Specifications. It will be the responsibility of the Contractor to require all subcontractors to submit the proper statements.

The Contractor or subcontractor will be required to submit any and all fees required for the statement of intent to pay prevailing wages and the affidavits of wages paid. Said fees shall accompany each statement or affidavit and shall be made payable to the Department of Labor and Industries.



GENERAL CONDITIONS - Continued

SECTION 14 - CONTRACTOR'S INSURANCE

The first and second paragraphs of Section 1-07.18 of the State Standard Specifications is hereby deleted and the following substituted therefore:

The Contractor shall obtain and keep in force during the term of the contract public liability and property damage insurance with companies or through sources approved by the State Insurance Commissioner pursuant to Title 48 RCW.

King County, its elected and appointed officials and its employees shall be named as an additional insured in any such public liability insurance policy.

SECTION 15 - PROSECUTION & PROGRESS

In accordance with Section 1-08.3 of the State Standard Specifications, the Contractor shall prepare and submit the progress schedule in the form of bar graphs developed under the critical path method, P.E.R.T., or other similar methods.

Delete the following in Section 1-08.3 of the State Standard Specifications: "After being awarded the contract," and replace with "After receipt of the notice of selection."

Delete the following in Section 1-08.4 of the State Standard Specifications: "date of execution" and replace with "receipt of the notice to proceed."

Delete the second sentence of the first paragraph of Section 1-08.5 of the State Standard Specifications and replace with: "The contract time shall start within 10 days after the receipt of the notice to proceed or the date the Contractor begins work, whichever is sooner. The Contractor shall not begin work until receipt of the notice to proceed."

SECTION 16 - SOURCE OF MATERIAL

No source of material has been provided for this project. The Contractor shall make his own arrangements to obtain these materials at his own expense, and all costs of acquiring, producing and placing the material in the finished work shall be considered incidental to the unit bid items involved.

SECTION 17 - CERTIFICATION OF MANUFACTURED MATERIALS

Certification of manufactured material shall be supplied to the project inspector before any payment will be made for that item of work.

GENERAL CONDITIONS - Continued

SECTION 18 - OFF-SHORE ITEMS

In compliance with the provisions of Chapter 139, Laws of 1967, the Contractor shall furnish, upon completion of the contract, a statement certified by the Contractor, setting forth the nature and source of off-shore items in excess of \$2,500 which have been utilized in the performance of the contract. The term "off-shore items" means those items procured from sources beyond the territorial boundaries of the United States, including Alaska and Hawaii.

SECTION 19 - WORK AREA

Contractor shall confine operations and storage to work area. Work area for all work shall be as shown on the drawings. In those locations where existing vegetation or improvements are within this area, the Contractor must work around the material.

SECTION 20 - MATERIAL AND EQUIPMENT STOCKPILE LOCATIONS

Stockpile materials and equipment only on approved areas of the site. Submit list of stockpile sites for approval before material is delivered. Stockpile areas shall not endanger or inhibit the public users of the site, outside the work area, in any way.

SECTION 21 - BARRICADES AND SIGNS

The Contractor, at his own expense, shall erect and maintain all barricades, guards, standard construction signs, warning signs and detour signs, as may be necessary to protect and safeguard the public at all times from injury or damage as a result of the Contractor's operations.

SECTION 22 - INSPECTION BY OWNER'S ENGINEER

All materials furnished by the Contractor shall be subject to the inspection and approval of the Engineer at any time during the progress of the work and until final completion thereof. The materials shall be delivered by the Contractor a sufficient length of time in advance of the work to enable the Engineer to make proper tests and inspection. As soon as materials have been tested and inspected, the Contractor shall immediately remove all rejected materials from the work and to such place distant therefrom as the Engineer may require, but the neglect or failure on the part of the Engineer to condemn or reject inferior materials or work shall not be as construed to imply an acceptance of the materials or work. The Contractor shall furnish at his own expense, such labor as may be required to enable the Engineer to make a thorough inspection of the materials for approval or rejection.

GENERAL CONDITIONS - Continued

SECTION 23 - CONTRACTOR'S REPRESENTATIVE ON THE WORK

The Contractor shall at all times when the work is in progress maintain a suitably equipped field office in the vicinity of the work, provided with a telephone, and at all times there shall be a representative of the Contractor in charge of such office and of the work, who is duly authorized to receive orders, directions and instructions of the Engineer, and put them into effect.

This representative shall be a responsible agent of the Contractor and any orders, directions, or instructions given to him shall be deemed to have been given to the Contractor, the same as though they had been given to him personally.

SECTION 24 - USE AND OCCUPANCY PRIOR TO COMPLETION

King County reserves the right to use and occupy any portion of this improvement which has been completed sufficiently to permit use and occupancy and such use shall not be construed as an acceptance of the work or any part thereof, and any claims which King County may have against the Contractor shall not be deemed to have been waived by such occupancy.

SECTION 25 - CHANGES IN PLANS OR QUANTITIES

The Owner shall have a right to make any reasonable change in the plans or quantities upon the recommendation of the Engineer that may be hereafter determined upon as necessary or expedient either before or after the beginning of the work by defining them in writing, and in case such alterations, on unit price contracts, increase or diminish the approximate quantities as stated in the schedule, then the Contractor shall be paid for the work actually done at the contract price that is specified in the Proposal, and such alterations shall not constitute a claim for damages nor shall any claim be made on account of anticipated profits on the work that may be altered or dispensed with.

SECTION 26 - CHANGES IN WORK AND EXTRA WORK

The right is reserved, without impairing the contract, to order the performance of such extra work of a class not contemplated in the Proposal as may be considered necessary to complete fully and satisfactorily the work included in the contract. Such changes and extra work shall be done in accordance with the contract documents insofar as the contract documents are applicable and shall be paid for as provided herein. In the event of any such changes or extra work of a class not covered by the prices included in the contract documents, the basis of payment shall be agreed upon in writing between the parties in the contract before such work is done. Where such method of payment cannot be agreed upon prior to the beginning of the work, then such work shall be performed by the Contractor on the basis of force account in accordance with Section 1-09.6 of the State Standard Specifications.

GENERAL CONDITIONS - Continued

SECTION 27 - DEFECTIVE WORK

The Contractor, upon being notified by the Engineer, shall remove or construct, or make good without cost to the County, any work which the Engineer may deem to have been defectively executed.

SECTION 28 - ASSIGNMENT OF CONTRACT AND SUBLETTING

For the purposes of this contract, the provisions of Section 1-08.2 of the State Standard Specifications shall be amended as follows:

The Contractor shall not assign this contract nor any part thereof, nor moneys due or to become due thereunder, without the prior written approval of the Owner. The Contractor shall not sublet any part of this contract without first having obtained the written consent of the Owner to do so. In the event such consent be given, it shall in no way release the Contractor from any responsibility, but he shall be held in all respects accountable for the same as if no consent had been given. The Contractor will be required to give his personal attention to the work which is sublet.

In order that the Owner may have ample opportunity to examine into the qualifications of the subcontractor, the Contractor shall, at the earliest practicable time, notify the Owner of the name and qualifications of the subcontractor to whom he proposes to award any subcontract in connection with the work. Notification to the Owner by the Contractor of his intent to sublet a part of the work shall be made by utilizing King County Form No. KCE-12, Request for Approval of Sub-contractors or Agents.

Before the Contractor shall make any agreement with any intended subcontractor or agent, he must first have received from the Owner's Engineer, an approved copy of the above-named King County Form (KCE-12).

The approval by the Owner of the award of a subcontract, shall not create any contractual relations between the subcontractor and the Owner. The Contractor shall bind the subcontractor to the terms and conditions of the contract documents insofar as the terms and conditions may control the work included in the subcontract. No award of a subcontract to any subcontractor who, in the judgment of the Engineer, is incompetent or unfit will be approved.

All other provisions of Section 1-08 of the State Standard Specifications not in conflict with the above shall apply to this contract.

SECTION 29 - DECISION OF ENGINEER FINAL

Any question of difference or controversies which may arise between the Owner and the Contractor with reference to the performance or non-performance of the work, or with reference to delays or penalties, or relating to plans, profiles, specifications, or technical sufficiency of materials furnished, or the work done under this contract shall be referred to the Engineer, whose decision shall be final and conclusive on both parties. The Engineer has authority to insure the proper execution of the contract.

SECTION 30 - NOTICE & SERVICE THEREOF

Whenever in this contract provision is made for notice to be given by the Owner to the Contractor, such notice shall be in writing and service thereof may be made by the Owner or his duly authorized representative on the Contractor in person or by mailing such notice to his last known address.

SECTION 31 - STATE SALES TAX

The Contractor shall not include King County's obligation for Washington State and local sales taxes. King County will pay the Washington State sales taxes only on the total contract price.

SECTION 32 - PAYMENT

The lump sum bid or unit contract price for each pay item multiplied by the number of units approved shall be full compensation for all costs of completing the item specified.

SECTION 33 - RETAINED PERCENTAGE FUNDS RELEASE

The Contractor shall comply with Section 14, chapter 260, Laws of 1981 and RCW 60.28.010 as follows:

Contracts for public improvements or work, other than for professional services, by the state, or any county, city, town, district, board, or other public body, herein referred to as "public body", shall provide, and there shall be reserved by the public body from the moneys earned by the contractor on estimates during the progress of the improvement or work, a sum not to exceed five percent, said sum to be retained by the state, county, city, town, district, board, or other public body, as a trust fund for the protection and payment of any person or persons, mechanic, subcontractor or materialman who shall perform any labor upon such contract or the doing of said work, and all persons who shall supply such person or persons or subcontractors with provisions and supplies for the carrying on of such work, and the state with respect to taxes imposed pursuant to Title 82 RCW which may be due from such contractor. Every person performing labor or furnishing supplies toward the completion of said improvement or work shall have a lien upon said moneys so reserved: PROVIDED, That such notice of the lien of such claimant shall be given in the manner and within the time provided in RCW 39.08.030 as now existing and in accordance with any amendments that may hereafter be made thereto: PROVIDED FURTHER, That the board, council, commission, trustees, officer or body acting for the state, county or municipality or other public body; (a) at any time after fifty percent of the original contract work has been completed, if it finds that satisfactory progress is being made, may make any of the partial payments which would otherwise be subsequently made in full; but in no event shall the amount to be retained be reduced to less than five percent of the amount of the moneys earned by the contractor: PROVIDED, That the contractor may request that retainage be reduced to one hundred percent of the value of the work remaining on the project; and (b) thirty days after completion and acceptance

GENERAL CONDITIONS - Continued

of all contract work other than landscaping, may release and pay in full the amounts retained during the performance of the contract (other than continuing retention of five percent of the moneys earned for landscaping) subject to the provisions of RCW 60.28.020.

SECTION 34 - HOLD HARMLESS CLAUSE

The Contractor agrees to protect and save King County, its elected and appointed officials and employees, harmless from and against all claims, demands and causes of action of any kind or character, including the cost of defense thereof, arising in favor of the Contractor's employees or third parties in connection with Contractor's activities on this project, except when such fault is solely and entirely the fault of King County or its above-named officials and employees.

## SPECIAL PROVISIONS

The following Special Provisions are in addition to the General Conditions and are fully considered as part of the agreement between the Contractor and King County.

### SECTION 1 - SCOPE OF WORK

The project involves repair of the existing runway (including 4,608 linear ft of spall repairs, 50 sq yd of asphalt repairs, fabric treatment of 105,486 linear ft of joints and cracks, replacement of 336 sq yd of damaged portland cement concrete [PCC] 967 sq yd of slabs, asphalt concrete [AC] pavement removal, 3,074 linear ft of AC crack repairs, and 1,001 linear ft of interface repairs between PCC/AC pavements), 42,800 tons of asphalt concrete pavement overlay of the existing runway, pavement markings, and surface treatment (grooving or porous friction course) of the new surface to minimize hydroplaning.

### SECTION 2 - MODIFICATIONS TO GENERAL CONDITIONS

1. Section 1. Delete the first paragraph and add the following paragraph:

The principal reference on this project is the "Standard Specifications for Road, Bridge, and Municipal Construction," issued by the Washington State Department of Transportation and the American Public Works Association, Washington State Chapter, 1984 edition, and adopted by the King County Council, hereafter cited as the "Standard Specifications."

2. Whenever reference is made in the General Conditions to "State Standard Specifications," such reference shall be construed to mean "Standard Specifications."
3. Whenever reference is made in the General Conditions to "County Road Engineer," such reference shall be construed to mean "Airport Engineer."
4. Section 16. Change the second line to read, "... make his own arrangements to obtain these materials at his own expense, and all...."

### SECTION 3 - LINES AND GRADES

The Engineer shall provide adequate survey information for the completion of this project. This information includes centerline stakes for the runway; offset stakes to locate and define the important details of new paving work; elevation stakes and fill amounts at key points for preleveling, leveling, and finish courses for the asphalt concrete paving; and control points for the pavement markings.

### SPECIAL PROVISIONS - 1

The Contractor shall furnish assistance to the Engineer in checking depths and measuring quantities for payment purposes.

The Contractor may, at his own expense, furnish additional survey information to aid him in the construction of the project beyond the information provided by the Engineer.

#### SECTION 4 - SAFETY PROVISIONS

All signs, barricades, traffic cones, flags, flagmen, lights, or markings as may be necessary to protect traffic and the work in progress will be provided, installed, and maintained by the Contractor. It shall remain the sole responsibility of the Contractor to ensure that all safety provisions necessary to protect traffic and the work in progress be carried out during the period of construction. Close cooperation will be required of the Contractor with the Engineer and the operating representatives of the airport to ensure that all safety precautions are carried out.

The Contractor shall comply with all safety rules and regulations required by the airport manager during the construction period. FAA requirements for ground traffic control on the airport shall be strictly adhered to. The Contractor shall maintain constant radio control at all times of vehicles working within 150 ft of active runway/taxiway pavements. The Engineer and his designated representatives will have radio communication with the airport control tower on the ground control frequency.

Instructions from the tower will be relayed to the Contractor's superintendent or foreman. It shall be the responsibility of the Contractor's superintendent or foreman to immediately relay the instructions to all construction vehicles in the area concerned, through the Contractor's own radio communication system, whether directly to each vehicle or relayed to each vehicle by foreman, flagman, or other personnel with radios.

The Contractor shall strictly adhere to the use of the haul routes that are shown in the plans or as may be agreed upon at the preconstruction conference.

When not in use during working hours, and at all other times, all equipment shall be kept clear of runways, taxiways, aprons, or roadway limits and, if over 3 ft high, 150 ft from pavement edge of runways and taxiways.

The Contractor shall remove any materials or debris from the active runways, taxiways, aprons, and roadways in a prompt manner, as they may be deposited as a result of the construction of this project. The Contractor shall be required to take immediate steps to remove this debris if, in the opinion of the Engineer, the debris represents a hazardous condition. At the end of each working day, the Contractor shall inspect the work site to be sure that all warning devices, signs, and barricades are properly installed and working and that the active runways, taxiways, aprons, and roadways affected by this project are clean and free of debris.

Aircraft shall have the right of way under all circumstances.

#### SPECIAL PROVISIONS - 2



It is prohibited to use runways or taxiways or adjacent field areas except as specifically shown on the drawings for borrow, haul, paving, and the installation of drainage items. It is emphasized that the Contractor's authority to operate does not extend to active taxiways except along established haul routes. The Airport Operations Department will continue to provide radio car escort when operations on active taxiways are required and for all out-sized equipment (cranes, earth movers, large trucks, etc.) moving over the ramp between work sites.

The Contractor shall be fully responsible for damage to said runways, taxiways, aprons, roadways, and highways, and shall repair same at his own expense to the satisfaction of the Engineer.

All Contractor vehicles operating on the airport ramp must be clearly identifiable as such and be equipped with signs painted or affixed on the sides of the vehicles showing the contracting firm's name. This procedure applies to job superintendents' personal vehicles as well. Unmarked vehicles encountered by our Airport Patrol, without exception, will be escorted off the field immediately. Vehicles and equipment operating in the aircraft areas of the airport shall be marked with a checkered flag 3-ft square on a staff with alternating 1-ft squares of international orange and white.

#### SECTION 5 - CONSTRUCTION SCHEDULE

King County International Airport is a busy active airport. Flight and vehicular operations must continue to use those portions of the runways, taxiways, aprons, or roadways not under construction. The areas for which this contract is proposed are very active and have a high traffic volume. It is therefore absolutely imperative that a schedule of the Contractor's operations be established and maintained in order that runways, taxiways, and apron areas be out of use as short a period as possible and that safety standards be maintained.

At the preconstruction conference, the Owner, the FAA, and the Contractor shall meet to discuss the project schedule, storage of materials, and any other special requirements that concern the project. A project schedule shall be presented to the Owner at this time. The following elements of a project schedule shall be used on this project.

1. The work once started shall proceed diligently without undue gaps in work except for adverse weather or other causes beyond the control of the Contractor.
2. Suggested Construction Schedule for Base Bid and Selected Alternate (based on a 50-consecutive-calendar-day construction period and 6-day work week)

<u>Phase</u>	<u>Start Date</u>	<u>Completion Date</u>
I	05 August	25 August
II	19 August	29 August
III	30 August	10 September

#### SPECIAL PROVISIONS - 3

<u>Phase</u>	<u>Start Date</u>	<u>Completion Date</u>
IV	06 September	20 September
Demobilization	21 September	23 September

3. Closure of the runway, during Phases II and III, which results in a usable length less than 5000 ft (Phase II) and 4970 ft (Phase III) shall be restricted to a maximum of fourteen (14) consecutive calendar days and shall be subject to liquidated damages.
4. To allow Boeing to land an incoming plane, 7000 ft of runway must be available on or about 19 September 1985. The Contractor will be advised of any changes in this date as soon as they are available.

The estimated date of NOTICE TO PROCEED for this contract is 5 August 1985.

#### SECTION 6 - TIME OF COMPLETION AND LIQUIDATED DAMAGES

Bidders shall agree to commence work on or before a date to be specified in a written Notice to Proceed by King County and to complete the project within fifty (50) consecutive calendar days.

The liquidated damages for final completion of this project shall be One Thousand and No/100 Dollars (\$1000.00) per calendar day. The liquidated damages for runway closures during Phases II and III which result in a usable length less than 5000 ft (Phase II) and 4970 ft (Phase III) shall be Five Thousand and No/100 Dollars (\$5000.00) per calendar day over fourteen (14) consecutive calendar days. Calendar days assessed for liquidated damages during Phases II and III will not be used in assessing liquidated damages for final completion of the project. Usable length, for assessing liquidated damages, shall be defined as the distance between threshold and temporary threshold bar markings (out to out) which is open for aircraft use. The surface shall be cured, free of debris, and free of abrupt paving edges. The Engineer shall make the final determination of usable runway length.

#### SECTION 7 - SCHEDULE OF DRAWINGS

The following list of drawings is hereby referenced and made a part of the Contract Documents:

<u>Sheet No.</u>	<u>Title</u>
1	Site Plan
2	Plan and Profile Sta 0+00 to 14+75
3	Plan and Profile Sta 14+75 to 29+65
4	Plan and Profile Sta 29+65 to 44+50
5	Plan and Profile Sta 44+50 to 59+17
6	Plan and Profile Sta 59+17 to 73+83
7	Plan and Profile Sta 73+83 to 88+72
8	Plan and Profile Sta 88+72 to 101+85
9	Typical Paving Sections

SPECIAL PROVISIONS - 4

<u>Sheet No.</u>	<u>Title</u>
10	Existing Runway Pavement Repairs Sta 10+00 to 20+00
11	Existing Runway Pavement Repairs Sta 20+00 to 30+00
12	Existing Runway Pavement Repairs Sta 30+00 to 40+00
13	Existing Runway Pavement Repairs Sta 40+00 to 50+00
14	Existing Runway Pavement Repairs Sta 50+00 to 60+00
15	Existing Runway Pavement Repairs Sta 60+00 to 70+00
16	Existing Runway Pavement Repairs Sta 70+00 to 80+00
17	Existing Runway Pavement Repairs Sta 80+00 to 90+00
18	Existing Runway Pavement Repairs Sta 90+00 to 100+00
19	Existing Runway Pavement Repairs Sta 100+00 to 101+20
20	Existing Runway Pavement Repair Details
21	Pavement Marking Details

#### SECTION 8 - INSURANCE

Awarded offeror shall furnish comprehensive liability insurance including general and automobile liability in the amount of a \$1,000,000 combined single limit with King County and its appointed and elected officials and employees named as additional insureds.

#### SECTION 9 - GUARANTEE

All work under this contract shall be fully guaranteed for a period of one year from the date of final acceptance against all defects in materials and workmanship.

#### SECTION 10 - PROTECTION OF UTILITY SERVICES

Due to the critical nature of certain utilities to the operation of the airport, the following Special Provisions for Protection of Cables, Controls, NAVAIDS, and Weather Bureau Facilities shall apply:

1. The Contractor is hereby informed that there are installed on the airport FAA NAVAIDS including, without limitation, ASR, UHF, and VHF receivers and transmitters; U.S. Weather Bureau facilities; electric cables and controls relating to NAVAID and facilities; and other electric power cables serving other facilities. Such NAVAIDS, Weather Bureau and other facilities, and electric cables must be fully protected during the entire construction time. Work under this contract can be accomplished in the vicinity of these facilities and cables only at approved periods of time. Approval is subject to withdrawal at any time because of changes in weather, emergency conditions, and for any other reason determined by the Engineers acting under the orders and instruction of the airport management and/or designated FAA representative. Any instructions to this Contractor to clear any given area, at any time, by the Engineers, the airport management, or the FAA Control Tower (by radio or other means) shall be immediately executed.

#### SPECIAL PROVISIONS - 5

Construction work shall be commenced in the cleared area only when additional instructions are issued by the proper authorities.

2. Power and control cables leading to and from any FAA NAVAIDS and Weather Bureau and other facilities will be marked in the field by the Engineers for the information of the Contractor, before any work in their general vicinity is started. Thereafter, through the entire time of this construction, they shall be protected from any possible damage, including crossing with unauthorized equipment, etc.
3. These special provisions intend to make perfectly clear the need for protection of FAA NAVAIDS, Weather Bureau and other facilities, and cables by this Contractor at all times.
4. The Contractor shall immediately repair, with identical material by skilled workmen, any underground cables serving FAA NAVAIDS and Weather Bureau and other airport facilities which are damaged by his workmen, equipment, or work at his own expense. Prior approval of the FAA must be obtained for the materials, workmen, time of day or night, method of repairs, and for any temporary or permanent repairs the Contractor proposes to make to any FAA NAVAIDS and facilities damaged by the Contractor. Prior approval of the Engineer or of the representative designated by the airport management must be obtained for the materials, workmen, time of day or night, and for the method of repairs for any temporary or permanent repairs the Contractor proposes to make to any other airport facilities and cables damaged by this Contractor.
5. It is recognized that the owners will incur costs for employees' salaries, engineering fees, and otherwise in connection with the damage, inspection, and repair of any such damage caused by the Contractor, and consequently that the airport may incur loss of income by reason of the diversion of aircraft traffic from the airport resulting from interruption of the use of airport facilities, and that such expenses and loss of income are not measurable now and may not be reasonably ascertainable at the time of any incident caused by this Contractor. The Airport and the Contractor hereby agree to the assessment of liquidated damages in lieu of such expenses of other damages incurred by the Airport or other owners. In addition to the obligation of this Contractor to immediately repair any cables or facilities damaged by the Contractor within 3 ft of the location on the ground defined by the Engineer, as set forth above, the sum of \$2000 for each interruption of the use of airport facilities shall be deducted from any money due the Contractor or, if no money is due the Contractor, the Airport shall have the right to recover said sum or sums from the Contractor, from the surety, or from both. The amounts of these deductions are not considered penalties.
6. If damage to or cutting of FAA cables results from this project, the cables must be repaired or spliced in accordance with FAA Specification 1391a, "Installation and Splicing of Underground Cables," dated 4 December 1972. (Only pressure-resin encapsulation splice envelopes will be allowed.)

## SECTION 11 - FEDERAL REQUIREMENTS

### 1. General and Labor Clauses

#### a. AIP Project

The project in this contract is included in AIP Project No. 3-53-0058-06, which is to be undertaken and accomplished by King County, Washington, in accordance with the terms and conditions of a grant agreement to be entered into between King County, Washington and the United States, under the Airport and Airway Development Act of 1970, as amended (84 Stat. 219), and FAR Part 152 (14 CFR Part 152), pursuant to which the United States will agree to pay a certain percentage of the costs of the project that are determined to be allowable project costs under the Act. The United States is not a party to this contract and no reference in this contract to the FAA or any representative thereof, or to any rights granted to the FAA or any representative thereof, or the United States by the contract, makes the United States a party to this contract.

#### b. Consent to Assignment

The Contractor shall obtain the prior written consent of King County, Washington, to any proposed assignment of any interest in or part of this contract.

#### c. Convict Labor

No convict labor may be employed under this contract.

#### d. Veterans Preference

In the employment of labor (except in executive, administrative, and supervisory positions), preference shall be given to qualified individuals who have served in the military service of the United States (as defined in Section 101(1) of the Soldiers' and Sailors' Civil Relief Act of 1940, as amended 50 A p.U.S.C. 511(1), and have been honorably discharged from the service, except that preference may be given only where that labor is available locally and is qualified to perform the work to which the employment relates.

#### e. Withholding, Sponsor from Contractor

Whether or not payments or advances to King County, Washington, are withheld or suspended by the FAA, King County, Washington, may withhold or cause to be withheld from the Contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics employed by the Contractor or any subcontractor on the work the full amount of wages required by this contract.

## SPECIAL PROVISIONS - 7

f. Nonpayment of Wages

If the Contractor or subcontractor fails to pay any laborer or mechanic employed or working on the site of the work any of the wages required by this contract, King County, Washington, may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment or advance of funds until the violations cease.

g. FAA Inspection and Review

The Contractor shall allow any authorized representative of the FAA to inspect and review any work or materials used in the performance of this contract.

h. Subcontracts

The Contractor shall insert in each of his subcontracts the provisions contained in paragraphs a, c, d, e, f, and g of this section, and also a clause requiring the subcontractors to include these provisions in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.

i. Contract Termination

A breach of paragraphs f, g, and h of this section may be grounds for termination of the contract.

2. Miscellaneous Clause Requirements  
(for all construction contracts and subcontracts)

During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor"), agrees as follows:

a. Compliance with Regulations

The Contractor shall comply with the regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation (Title 49, Code of Federal Regulations, Part 21), as they may be amended from time to time (hereinafter referred to as the Regulations), which are incorporated by reference and made a part of this contract.

b. Nondiscrimination

The Contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations,

including employment practices, when the contract covers a program set forth in Appendix B of the Regulations.

c. Solicitations for Subcontractors, Including Procurements of Materials and Equipment

In all solicitations, either by competitive bidding or negotiations made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.

d. Information and Reports

The Contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the FAA to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the sponsor or the FAA, as appropriate, and shall set forth what efforts it has made to obtain the information.

e. Sanctions for Noncompliance

In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, the sponsor shall impose such contract sanctions as it or the FAA may determine to be appropriate, including, but not limited to

- (1) Withholding of payments to the Contractor under the contract until the Contractor complies, and/or
- (2) Cancellation, termination, or suspension of the contract, in whole or in part.

f. Incorporation of Provisions

The Contractor shall include the provisions of paragraphs a through e in every subcontract, including procurements of materials and leases of equipment, unless exempt by the regulations or directives issued pursuant thereto. The Contractor shall take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance; provided, however, that in the event a Contractor becomes involved in or is threatened with litigation with a subcontractor or supplier as a result of such direction, the Contractor may request the sponsor to enter into such litigation to protect the interests of the

sponsor and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

g. Breach of Contract Terms - Sanctions

Any violation or breach of the terms of this contract on the part of the Contractor/subcontractor may result in the suspension or termination of this contract or such other action which may be necessary to enforce the rights of the parties of this agreement.

h. Contract Termination

This contract may be terminated by the grantee for default or any other conditions or circumstances beyond the control of the Contractor. Termination conditions, the manner by which it will be effected and the basis for settlement, are as stated in Section 1-08.10 of the State Standard Specifications.

i. Rights to Inventions - Materials (for contracts or agreements involving imported products, processes, methods, etc.)

All rights to inventions and materials generated under this contract are subject to regulations issued by the FAA and the recipient of the federal grant under which this contract is executed. Information regarding these rights is available from the FAA and the grantee.

3. Labor Contract Clauses for Construction Contracts  
(also subcontracts in excess of \$2000)

a. Minimum Wages

- (1) All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFT Part 3), the full amounts due at time of payment computed at wage rates not less than those contained in the wage determination decision(s) of the Secretary of Labor which is (are) attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics; and the wage determination decision(s) shall be posted by the Contractor at the site of the work in a prominent place where it (they) can be easily seen by the workers. For the purpose of this paragraph, contributions made or costs reasonably anticipated under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers and mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of subparagraph (4), below. Also for the purpose of this paragraph, regular contributions made or costs incurred for



more than a weekly period under plans, funds, or programs, but covering the particular weekly period, are deemed to be constructively made or incurred during such weekly period [29 CFR 5.5[a][1][i]].

- (2) Any class of laborers or mechanics, including apprentices and trainees, which is not listed in the wage determination(s) and which is to be employed under the contract, shall be classified or reclassified conformably to the wage determination(s), and a report of the action taken shall be sent by King County, Washington, to the FAA for approval and transmittal to the Secretary of Labor. In the event that the interested parties cannot agree on the proper classification or reclassification of a particular class of laborers and mechanics, including apprentices and trainees, to be used, the question accompanied by the recommendation of the FAA shall be referred to the Secretary of Labor for final determination [20 CFR 5.5(a)(1)(ii)].
- (3) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly wage rate and the Contractor is obligated to pay a cash equivalent of such a fringe benefit, an hourly cash equivalent thereof shall be established. In the event the interested parties cannot agree upon a cash equivalent of the fringe benefit, the question accompanied by the recommendation of the FAA shall be referred to the Secretary of Labor for determination [29 CFR 5.5(a)(1)(iii)].
- (4) If the Contractor does not make payments to a trustee or other third person, he may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing benefits under a plan or program of a type expressly listed in the wage determination decision of the Secretary of Labor which is a part of this contract; provided, however, the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program [29 CFR 5.5(a)(1)(iv)].

b. Withholding: FAA from Sponsor

Pursuant to the terms of the grant agreement between the United States and King County, Washington, relating to the Airport Development Aid Project No. 3-53-0058-04 and Part 152 of FAR (14 CFR Part 152), the FAA may withhold or cause to be withheld from King County, Washington, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices and trainees, employed or working on the site of the work all or part of the wages required by this

contract, the FAA may, after written notice to King County, Washington, take such action as may be necessary to cause the suspension of any further payment or advance of funds until such violations have ceased [29 CFR 5.5(a)(2)].

c. Payrolls and Basic Records

- (1) Payrolls and basic records relating thereto will be maintained during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records will contain the name and address of each such employee, his correct classification, rates of pay including rates of contributions or costs anticipated of the types described in Section 1(b)(2) of the Davis-Bacon Act, daily and weekly number of hours worked, deductions made, and actual wages paid. Whenever the Secretary of Labor has found, under 29 CFT 5.5(a)(1)(iv) [see paragraph (4) of paragraph a, above], that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide any benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits [29 CFR 5.5(a)(3)(i)].
- (2) The Contractor will submit weekly a copy of all payrolls to King County, Washington, for availability to the FAA, as required by paragraph 152.59(a). The copy shall be accompanied by a statement signed by the employer or his agent indicating that the payrolls are correct and complete, that the wage rates contained therein are not less than those determined by the Secretary of Labor, and that the classifications set forth for each laborer or mechanic conform with the work he performed. A submission of a "Weekly Statement of Compliance" which is required under this contract and the Copeland Regulations of the Secretary of Labor (29 CFR Part 3) and the filing with the initial payroll or any subsequent payroll of a copy of any findings by the Secretary of Labor, under 29 CFR 5.5(a)(1)(iv) [see paragraph (4) of paragraph a, above], shall satisfy this requirement. The prime Contractor shall be responsible for submission of copies of payrolls of all subcontractors. The Contractor will make the records required under the labor standards clauses of the contract available for inspection by authorized representatives of the FAA and the Department of Labor, and will permit such representatives to interview employees during working hours on the job. Contractors employing apprentices or trainees under approved programs shall include a notation on the first weekly certified payrolls submitted to King County, Washington

for availability to the FAA, that their employment is pursuant to an approved program and shall identify the program [29 CFR 5.5(a)(3)(ii)].

d. Apprentices and Trainees

(1) Apprentices

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed and individually registered in a bona fide apprenticeship program registered with the United States Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau, or if a person is employed in his first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training of a state apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen in any craft classification shall not be greater than the ratio permitted to the Contractor as to his entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not a trainee, as defined in subparagraph (2) of this paragraph, or is not registered or otherwise employed as stated above, shall be paid the wage rate determined by the Secretary of Labor for the classification of work he actually performed. The Contractor or subcontractor will be required to furnish to King County, Washington, or a representative of the Wage-Hour Division of the U.S. Department of Labor written evidence of the registration of his program and apprentices, as well as the appropriate ratios and wage rates (expressed in percentages of the journeymen hourly rates), for the area of construction prior to using any apprentices on the contract work. The wage rate paid apprentices shall be not less than the appropriate percentage of the journeymen's rate contained in the applicable wage determination [29 CFR 5.5(a)(4)(i)].

(2) Trainees

Except as provided in 29 CFR 5.15, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the United States Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training. The ratio of trainees to journeymen shall not be greater than permitted under the plan approved by the Bureau of Apprenticeship and Training. Every trainee must be paid at not less than the rate specified in the approved program for his level of

progress. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Bureau of Apprenticeship and Training shall be paid not less than the wage rate determined by the Secretary of Labor for the classification of work he actually performed. The Contractor or subcontractor will be required to furnish to King County, Washington, or a representative of the Wage-Hour Division of the U.S. Department of Labor written evidence of the certification of his program, the registration of the trainees, and the ratios and wage rates prescribed in that program. In the event the Bureau of Apprenticeship and Training withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved [29 CFR 5.5(a)(4)(ii)].

(3) Equal Employment Opportunity

The utilization of apprentices, trainees, and journeymen under this paragraph shall be in conformity with the equal opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30 [29 CFR 5.5(a)(4)(iii)].

(4) Application of 29 CFR 5.5(a)(4)

On contracts in excess of \$2000, the employment of all apprentices and trainees as defined in 29 CFR 5.2(c) shall be subject to the provisions of 29 CFR 5.5(a)(4) [see paragraph d, subparagraphs (1), (2), and (3), above].

(5) Compliance with Copeland Regulations

The Contractor shall comply with the Copeland Regulations (29 CFR, paragraph 3) of the Secretary of Labor which are herein incorporated by reference [29 CFR 5.5(1)(5)].

f. Overtime Requirements

No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any laborer or mechanic in any work week in which he is employed on such work to work in excess of 8 hours in any calendar day or in excess of 40 hours in such work week unless such laborer or mechanic received compensation at a rate not less than 1-1/2 times his basic rate of pay for all hours worked in excess of 8 hours in any calendar day or in excess of 40 hours in such work week, as the case may be [29 CFR 5.5(c)(1)].

g. Violations, Liability for Unpaid Wages, Liquidated Damages

In the event of any violation of paragraph f of this section, the Contractor and any subcontractor responsible therefor shall be liable to any affected employee for his unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed, with respect to each individual laborer or mechanic employed in violation of said paragraph f of this section, in the sum of \$10 for each calendar day of which such employee was required or permitted to work in excess of 8 hours or in excess of the standard work week of 40 hours without payment of the overtime wages required by said paragraph f of this section [20 CFR 5.5 (c)(2)].

h. Withholding for Unpaid Wages and Liquidated Damages, and Priority of Payment

The FAA may withhold or cause to be withheld, from any monies payable on account of work performed by the Contractor or subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in paragraph g of this section [29 CFR 5.5(c)(3)].

i. Working Conditions

No contractor may require any laborer or mechanic employed in the performance of any contract to work in surroundings or under working conditions that are unsanitary, hazardous, or dangerous to his health or safety as determined under construction safety and health standards (29 CFR Part 1926) and other occupational and health standards (29 CFR Part 1910) issued by the Department of Labor.

j. Subcontracts

The Contractor will insert in each of his subcontracts the clauses contained in paragraphs a through k of this section, and also a clause requiring the subcontractors to include these provisions in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made [29 CFR 5.5(a)(6), 5.5(c)(4)].

k. Contract Termination; Debarment

A breach of paragraphs a through e and j of this section may be grounds for termination of the contract and for debarment as provided in Section 5.6 of the Regulations of the Secretary of Labor as codified in 29 CFR 5.6 [29 CFR 5.5(a)(7)].

4. Equal Employment Opportunity Clauses for Construction Contracts (also subcontracts exceeding \$10,000)

During the performance of this contract, the Contractor agrees as follows, except any contracts/subcontracts (or certifications preliminary thereto) with a state or local government or any agency, instrumentality or subdivision thereof shall not be applicable to any agency, instrumentality, or subdivision of such governments which does not participate in work on or under the contract or subcontract.

- a. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- b. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
- c. The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding a notice to be provided advising the said labor union or workers' representatives of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- d. The Contractor will comply with all provisions of Executive Order 11246 of 24 September 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- e. The Contractor will furnish all information and reports required by Executive Order 11246 of 24 September 1964, as amended, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the FAA and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- f. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor

may be declared ineligible for further government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of 24 September 1965, as amended, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of 24 September 1965, as amended, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

- g. The Contractor will include the portion of the sentence immediately preceding paragraph a and the provisions of paragraphs a through g in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of 24 September 1965, as amended, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the FAA, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

5. Bonding Clauses for Construction Contracts  
(also subcontracts) Exceeding \$100,000

- a. The Contractor agrees to furnish a performance bond for 100% of the contract price. This bond is one that is executed in connection with a contract to secure fulfillment of all the Contractor's obligations under such contract.
- b. The Contractor agrees to furnish a payment bond for 100% of the contract price. This bond is one that is executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

6. Clean Air and Water Pollution Control Requirements (only applies  
to construction contracts and subcontracts exceeding \$100,000)

Contractors and subcontractors agree

- a. That any facility to be used in the performance of the contract or to benefit from the contract is not listed on the Environmental Protection Agency (EPA) List of Violating Facilities.
- b. To comply with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations issued thereunder.
- c. That as a condition for award of a contract, they will notify the awarding official of the receipt of any communication from the EPA indicating that a facility to be utilized for performance of or

benefit from the contract is under consideration to be listed on the EPA List of Violating Facilities.

- d. To include or cause to be included in any contract or subcontract which exceeds \$100,000 the aforementioned criteria and requirements.



	Base Hourly Rate	Fringe Benefits
DECISION NO. WA94-5040 - Mod 8 (49 FR 43532 - Nov. 16, 1984) Statewide Washington		
CHANGE:		
CARPENTERS:		
Area 4:		
Carpenters	16.57	3.42
Filedriver, sawfiller, stationary power woodworking tool	16.72	3.42
Boonmen, Carpenters (burned, charred, treated material)	16.82	3.42
Filedriver, crosscut	16.93	3.42
Millwright, Machine Erectors	17.07	3.42
ELEVATOR MECHANICS:		
Area 1	14.855	a+3.29
GLAZIERS:		
Area 3	16.86	b+2.68
PAINTERS:		
Area 1:		
Drywall Taper	14.67	2.59
Area 4:		
Scriper	16.65	1.83
SHEET METAL WORKERS:		
Area 3	10.04	4.54
TERRAZZO WORKERS, TILE SETTERS		
Area 2	16.48	2.00
Area 7	17.44	3.43
LINE CONSTRUCTION:		
Group 6:		
Head groundman (chipper)	13.66	
FRINGE BENEFITS:		
Groups 1 to 3		3.25+35%
Groups 4 to 7		3.25+35%
ELECTRONIC TECHNICIANS:		
Area 1	12.82	1.11+3%
ADD:		
ELECTRONIC TECHNICIANS:		
Area 3:		
Grays Harbor, Lewis, Mason, Pierce, Pacific, and Thurston Counties	14.00	7.42

DECISION NO. 446-5532 - Mod 3 164 IR 45532 - Nov. 10, 1961 Statewide Washington	Book Number Date	Page Number
<p>CHIT:</p> <p>Truck Drivers (Area 1):</p> <p>Group 2:</p> <p>Chit pickup haulin' material from group description (p. 2)</p>		

INS, P. 7

EXCEPTIONS: Paying within 45 mile radius of  
Spokane or Lewiston shall receive full

MODIFICATIONS P. 6

SUPERSEDES DECISION

STATE: Washington COUNTIES: Statewide  
 DECISION NUMBER: WA84-5040 DATE: Date of Publication  
 Supersedes Decision No. WA83-1110 dated June 3, 1981 in 48 RA 25109  
 DESCRIPTION OF WORK: Building Projects (does not include single family  
 homes and apartments up to and including 4 stories), Heavy and Highway  
 Projects and Dredging

	Basic Hourly Rate	Fringe Benefit		Basic Hourly Rate	Fringe Benefit
<b>ASBESTOS WORKERS:</b>			<b>CARPENTERS (CONT'D):</b>		
Area 1	21.07	3.30	Piledriver, creosoted	16.53	3.67
Area 2	21.52	3.54	material		
Area 3	20.15	3.53	Millwright, machine	16.63	3.67
BOTTLERMAKERS	19.67	4.25	erector		
BRICKLAYERS, MARBLE			AREA 2: 2-		
SETTLERS:			Carpenters & Drywall	17.22	2.81
Area 1:			applicator		
Masonry contracts			Carpenter on creosoted	17.32	2.81
under \$100,000.00	13.07	4.04	material		
Masonry contracts over			Sawfilers, stationary		
\$100,000.00	16.23	4.04	power saw, floor		
Area 2	17.28	1.87	finisher, floor layers		
Area 3	17.84	2.29	shinglet, floor winder		
Area 4	18.45	3.18	and other stationary		
Area 5	17.11	2.85	power woodworking		
Area 6:			tools	17.35	2.81
Masonry contracts			Millwright & machine	17.72	2.81
under \$100,000.00	13.31	3.40	erector		
Masonry contracts over			Piledriver, bridge,		
\$100,000.00	16.64	3.40	dock and wharf		
Area 7	18.18	3.50	builders	17.42	2.81
Area 8	18.35	3.28	Acoustical workers	17.38	2.81
<b>CARPENTERS:</b>			Boom men	17.47	2.81
Area 1:			AREA 3:		
(See footnote "e" re-			(See Footnote "d"		
garding cost of			regarding cost of		
project)			project)		
Carpenters	12.68	3.67	Carpenters, automatic		
Piledriver			nailing machine, form		
Piledriver	12.80	3.67	stripper, manhole		
Boom man	12.88	3.67	builder	16.31	4.02
Creosote	13.00	3.67	Floor layers & finishers,		
Millwright	13.08	3.67	stationary power saw		
All other work:			op.	16.46	4.02
Carpenters & Lathers	16.13	3.67	Millwright & machine		
Piledriver, saw filler,			erector	16.56	4.02
stationary power			Certified welder	16.71	4.02
woodworking tool op.	16.28	3.67	Piledrivermen, bridge,		
Boom men, carpenters			dock & wharf builder	16.41	4.02
working on burned,			Boom men	16.51	4.02
charred, creosoted or			AREA 4:		
similarly treated			Carpenters	16.27	3.32
material	16.38	3.67	Piledriver, sawfiller,		
			stationary power wood-	16.42	3.32
			working tool		

	Basic Hourly Rates	fringe Benefits		Basic Hourly Rates	fringe Benefits
CARPENTERS (CONT'D):			ELECTRICIANS:		
AREA 4: (CONT'D):			Area 1:		
Boom men, carpenters working on burned, charred, or similarly treated material	15.52*	3.32	Electricians	19.70	3.4*
Fill-driver, creosote	16.63	3.32	Cable Splicers	20.10	3.33
Millwright & machine erector	15.77	3.32	Area 2:		
AREA 5:			Electricians	20.87	3.4*
Carpenters, lathers, sawfilers, stationary power saw, floor layer, floor finisher, floor sander and stationary wood working tools	14.00	2.66	Cable Splicers	21.91	3.4*
Millwright & machine erector	17.56	2.66	Area 3:		
Piledriver, bridge, dock and wharf builder	17.26	2.66	Electricians	20.03	3.4*
Acoustical workers	17.22	2.66	Cable Splicers	22.03	3.4*
CEMENT MASONS:			Area 4:		
AREA 1:			Electricians	17.62	3.4*
Group 1	15.62	3.70	Cable Splicers	19.38	3.38*
Group 2	16.12	3.70	Area 5:		
Group 3	16.62	3.70	Electricians	18.80	3.4*
AREA 2:			Cable Splicers	19.55	3.4*
Cement masons	17.86	3.45	Area 6:		
Composition, color, mastic, trowel machine, grinder, power tool, gunnite nozzle man	18.11	3.45	Electricians	10.06	9.4*
AREA 3:			Cable Splicers	19.87	9.4*
Cement masons	16.95	3.00	Area 7:		
Composition, color, mastic, trowel machine, grinder, power tools, gunnite nozzle man	17.20	3.00	Electricians	18.70	3.4*
AREA 4:			Cable Splicers	20.57	3.4*
Cement masons	16.49	3.22	Area 8:		
Composition workers and power machinery	16.80	3.22	Electricians	21.00	3.4*
AREA 5:			Cable Splicers	21.10	3.4*
Group 1	15.88	3.20	ELECTRONIC TECHNICIANS:		
Group 2	16.38	3.20	Area 1:	10.08	3.4*
Group 3	16.88	3.20	Area 2:	11.66	2.63
DRYWALL & ACOUSTICAL APPLICATORS:					
Area 1	14.40	4.02			

	Basic Hourly Rates	fringe Benefits		Basic Hourly Rates	fringe Benefits
ELEVATOR CONSTRUCTORS:			PAINTERS (Cont'd):		
Mechanics:			Area 4:		
Area 1	19.855	4.3.37	Striper	16.65	2.05
Area 2	20.76	4.1.00	Area 5:		
Area 3	19.445	4.3.00	Journeyman Painters	15.97	2.46
Elevator Helpers - Areas 1, 2 and 3 - 70% of Journeyman Rate Plus the above Fringe Benefits			Taper Finishers	16.22	2.46
Probationary Helpers - Areas 1, 2 and 3 - 50% of Journeyman Rate excluding Fringe Benefits			Spray Painters, Steel Painters, Steam Cleaning, Acid Etching	16.47	2.46
GLAZIERS:			Swing Stage Work or high work over 30 ft.	16.67	2.46
Area 1	13.70	4.1.34	Bitumastic, Sand Blasting, Bridges, Towers, Stacks, Steeples, Tank on Legs	16.77	2.46
Area 2	17.11	2.76	TV, Radio and Electrical Transmission Towers	17.47	2.46
Area 3	10.91	2.51	PLASTERERS:		
Area 4	13.79	2.04	Area 1	15.88	3.20
Area 5	17.84	4.1.85	Area 2	17.31	3.62
Area 6	13.06	2.03	Area 3	16.23	3.31
Area 7	16.24	1.84	PLASTERERS' TENDERS:		
INSULATION APPLICATORS	14.22	2.66	Area 1	14.27	3.37
IRONWORKERS	17.48	4.71	PLUMBERS:		
LATHERS:			Area 1	17.25	6.82
Area 1	17.27	3.05	Area 2	19.43	6.98
Area 2	14.42	1.84	Area 3	19.89	6.76
MASON TENDERS:			Area 4	20.48	7.70
Area 1	14.76	3.30	Area 5	19.00	6.82
PAINTERS:			ROOFERS:		
Area 1:			Area 1	14.56	4.10
Brush	15.97	2.59	Area 2	16.48	2.55
Drywall Taper	14.39	2.59	Area 3:		
Steel Spray, Steam Cleaning	16.47	2.59	Roofers; Waterproofers	18.85	2.57
Swing Stage or High work over 30'	16.67	2.59	Slate and Tile Roofers	19.10	2.57
Bitumastic; Sandblasting; Bridges; Tanks on legs; Towers; Stacks; Steeples	16.77	2.59	Area 4:		
TV, Radio and Electrical Transmission Towers	17.47	2.59	Roofers; Waterproofers	16.75	3.04
Area 2:			Slate and Tile Roofers	17.00	3.04
Brush	15.54	3.69	Area 5:		
Spray	16.24	3.09	Roofers; Waterproofers	14.77	1.81
Bridges, High work over 50' (brush)	17.14	3.09	Slate and Tile Roofers	15.27	1.81
Bridges, High work over 50' (spray)	17.79	3.09	Area 6:		
Drywall Finishers	17.48	2.11	Roofers	14.60	2.50
Highway & Parking Lot Painter	17.64	1.03	Handling of irritating material (coal tar or epoxy)	16.60	2.50
Area 3:					
General Painters	16.74	2.72			
Drywall Tapers	17.78	2.72			
Industrial Painter	17.14	2.72			

Basic Monthly Rates	Prime Benefits

(See footnote "e" regarding cost of project.)  
All Counties and portions of Counties East of the 120th Meridian  
(except DOE Hanford Site in Benton and Franklin Counties)

<u>GROUPS</u>	<u>BASE RATE</u>	<u>FRINGE BENEFITS</u>
1	\$13.72	\$3.37
2	13.97	3.37
3	14.22	3.37
4	14.47	3.37

All Counties West of the 120th Meridian including the portions of Chelan, Douglas, Kittitas, Okanogan and Yakima that lie west of the 120th Meridian and the Northern portion of Pacific County (excluding those areas included in Area 3)

GROUPS	BASE RATE	FRINGE BENEFITS
1	\$ 6.46	\$1.43
2	10.78	3.43
3	14.96	3.43
4	15.44	3.43
5	15.80	3.43

Laborer	13.80	3.31
Topman	14.14	3.31
Pipe layer	14.20	3.31

AREA 3

(See Footnote "d" regarding cost of project)  
Clark, Cowitz, Klickitat, Skamania, and Wahkiakum Counties, and  
the Southern portion of Pacific County

<u>GROUPS</u>	<u>(ZONE 1) BASE RATE</u>	<u>(Add to BASE RATE)</u>
1	\$11.49	Zone 2 - 1.75
2	13.94	Zone 3 - 1.15
3	14.24	Zone 4 - 1.70
4	14.49	Zone 5 - 2.75
5	10.87	
		<u>FRINGE BENEFITS:</u>
		\$1.10

## LABORERS (CONT'D)

## AREA 4

DOE Hanford Site in Benton & Franklin  
Counties

GROUPS	BASE RATE	FRINGE BENEFITS
1	\$14.10	\$ 3.12
2	14.35	3.12
3	14.60	3.12
4	14.85	3.12
5	15.10	3.12

## LINE CONSTRUCTION

BASE RATE (ZONE 1)	
Group 1: Cable Splicer, Leadman Pole Sprayer	\$20.01
Group 2: Lineman, Pole Sprayer, Heavy Line	
Equipment Man, Certified Lineman Welder	18.11
Group 3: Tree Trimmer	16.35
Group 4: Line Equipment Man	15.61
Group 5: Head Groundman, Powderman, Jackhammer	
Man	13.65
Group 6: Head Groundman	13.65
Group 7: Groundman	12.84
FRINGE BENEFITS	
Groups 1 to 3 - \$3.00+34¢	
Groups 4 to 7 - 2.30+34¢	
ZONE DIFFERENTIAL (ADD TO BASE RATE)	
Zone 2 - \$2.40	
Zone 3 - 3.15	
Zone 4 - 3.90	
Zone 5 - 5.15	

\*Groups 1 and 6 receive BASE RATE ONLY (no Zone Differential)

## ZONE DEFINITIONS - LINE CONSTRUCTION ONLY

- ZONE 1 - 0 to 1 miles radius from the geographical center of Seattle, Tacoma, Portland, Medford  
 ZONE 2 - 1 to 20 miles radius from Seattle, Tacoma, Portland, Medford, and 0 to .6 miles radius from the Cities listed below  
 ZONE 3 - 20 to 35 miles radius from all Cities  
 ZONE 4 - 35 to 50 miles radius from all Cities  
 ZONE 5 - More than 50 miles radius from all Cities

## BASE POINTS

Bellingham	Astoria	Coeur D'Alene	Ellensburg
Ephrata	Baker	Kellogg	Everett
Kennecook	Bend	Lewiston	Longview
Olympia	Corvallis	Oro Fino	Sandpoint
Spokane	Lakeview	Walla Walla	Klamath Falls
Wenatchee	Pendleton	Salem	Roseburg
Wilbur	The Dalles	Yakima	Umatilla
Eugene	Burns		

## POWER EQUIPMENT OPERATORS:

(AREA 1)  
 (See footnote "e" regarding cost of project)  
 All Counties and portions of Counties East of the 120th Meridian (except DOE Hanford Site in Benton and Franklin Counties):  
 Group 1  
 Group 2  
 Group 3  
 Group 4  
 Group 5  
 Group 6  
 Group 7  
 Group 8

(AREA 2)  
 All Counties and portions of Counties West of the 120th Meridian (except those enumerated in

(Area 1):  
 Group 1  
 Group 2  
 Group 3  
 Group 4  
 Group 5  
 Group 6

(AREA 3)  
 (See footnote "d" regarding cost of project)  
 Clark, Cowlitz, Klickitat, Skamania, and Wahkiakum Counties; and the Southern portion of Pacific County:

Group 1  
 Group 2  
 Group 3  
 Group 4  
 Group 5  
 Group 6  
 Group 7  
 Group 8  
 Group 9  
 Group 10  
 Group 11  
 Group 12  
 Group 13  
 Group 14  
 Group 15  
 Group 16  
 Group 17  
 Group 18  
 Group 19

Base Hourly Rate	Fringe Benefits
14.02	4.35
14.32	4.35
14.87	4.35
15.02	4.35
15.17	4.35
15.42	4.35
15.67	4.35
16.67	4.35
18.71	4.16
18.27	4.16
17.79	4.16
17.43	4.16
17.13	4.16
15.33	4.16
ZONE 1	
15.00	4.60
15.18	4.60
15.33	4.60
15.53	4.60
15.56	4.60
15.67	4.60
15.74	4.60
15.87	4.60
15.96	4.60
16.04	4.60
16.06	4.60
16.15	4.60
16.25	4.60
16.48	4.60
16.67	4.60
16.91	4.60
17.10	4.60
17.34	4.60
17.52	4.60

## POWER EQUIPMENT OPERATORS:

(AREA 3) (Cont'd)  
 ZONE DIFFERENTIAL -  
 (Add to Zone 1 Rate):

Zone 2 - \$0.65  
 Zone 3 - 1.15  
 Zone 4 - 1.70  
 Zone 5 - 2.75

Sever & Waterline Construction:  
 Group 1:

Backhoe (780 Case type & larger with attachments),  
 Ditching Machine,  
 Side Boom (all Cat, Type D-3 & larger),  
 Dozer (all Cat, Type D-3 & larger),  
 Motor Grader, Back Filler, Front-end Loader (2 yds. & over), Mechanic,  
 Class, Dragline,  
 Crane, Scaffolding,  
 Mechanic Welder,  
 Shovel 3 yds. & under

Group 2:  
 Backhoe (680 Case type & smaller with attachments),  
 Side Boom (any smaller than Cat D-3), Dozer (any type smaller than Cat D-3), Front-end Loader (under 2 yds.), G.C. Truck,  
 Boring Machine,  
 Bending Machine,  
 Boom Truck (optional), Pot  
 firemen (engine operated above 3 bbl) Service Plov,  
 Mechanical Greaser  
 (large grease truck) Drills  
 (Lorol type), Tract-  
 tail, Well point system, Paving  
 Machines, Rollers  
 & Compactors

Base Hourly Rate	Fringe Benefits
16.92	4.01
16.425	4.01

Page 9

DECISION NO. 1 WA84-5040

Page 8

DECISION NO. 1 WA84-5040

Page 9		Page 8	
DECISION NO. 1 WA84-5040		DECISION NO. 1 WA84-5040	
POWER EQUIPMENT OPERATORS Sewer & Waterline Construction (Cont'd): Group 1: Oilier, Air Compressor, pump, Oil-Grassier, Chain Type Ditcher (Ditch Witch) Con- crete Saw, Welding Machine (DREDGING - AREA 1) All Counties & portions of the 120th Meridian: Group 1 Group 2 Group 3 Group 4 Group 5 (DREDGING - AREA 2) All Counties & portions of the 120th Meridian (except those enumerated in Area 3) and the Northern part of Pacific County: Group 1 Group 2 Group 3 Group 4 Group 5 (DREDGING - AREA 3) Clark, Coolitz, Klickitat Counties; Pacific County (Southern portion); Skamania & Wahkikium Counties: Group 1 Group 1-A Group 2 Group 3 Group 4 Group 4 (AREA 4) DOG Hanford Site in Ben- ton and Franklin Counties: Group 1 Group 2 Group 3 Group 4 Group 5 Group 6 Group 7 Group 8 Group 9		TRUCK DRIVERS (AREA 1) (See footnote "a" re- garding cost of project) All Counties & portions of the 120th Meridian (except DOG Hanford Site in Benton & Franklin Counties; Group 1 Group 2 Group 3 Group 4 Group 5 Group 6 Group 7 Group 8 Group 9 Group 10 Group 11 Group 12 Group 13 Group 14 Group 15 (AREA 2) All Counties & portions of Counties West of the 120th Meridian (except those enumerated in Area 3) including the Northern portion of Pacific County & all of Klickitat & Yakima Counties: Group 1 Group 2 Group 3 Group 4 Group 5 Group 6 Group 7 Group 8 Group 9 Group 10 Group 11 Group 12 Group 13 Group 14 Group 15 Group 16 Group 17 Group 18 Group 19 Group 20 Group 21 Group 22 Group 23 TRUCK DRIVERS: (AREA 1) (See footnote "a" re- garding cost of project) All Counties & portions of the 120th Meridian (except DOG Hanford Site in Benton & Franklin Counties; Group 1 Group 2 Group 3 Group 4 Group 5 Group 6 Group 7 Group 8 Group 9 Group 10 Group 11 Group 12 Group 13 Group 14 Group 15 (AREA 2) All Counties & portions of Counties West of the 120th Meridian (except those enumerated in Area 3) including the Northern portion of Pacific County & all of Klickitat & Yakima Counties: Group 1 Group 2 Group 3 Group 4 Group 5 Group 6 Group 7 Group 8 Group 9 Group 10 Group 11 Group 12 Group 13 Group 14 Group 15 Group 16 Group 17 Group 18 Group 19 Group 20 Group 21 Group 22 Group 23 TRUCK DRIVERS (Cont'd): (See footnote "a" regard- ing cost of project) Clark, Coolitz, Klickitat, Skamania, & Wahkikium Counties; & the Southern portion of Pacific County: Group 1 Group 2 Group 3 Group 4 Group 5 Group 6 Group 7 Group 8 Group 9 Group 10 Group 11 Group 12 Group 13 Group 14 ZONE DIFFERENTIAL - (Add to Zone 1 Rate): Zone 2 - \$0.65 Zone 3 - 1.15 Zone 4 - 1.70 Zone 5 - 2.75 (AREA 4) DOG Hanford Site in Ben- ton & Franklin Counties: Group 1 Group 2 Group 3 Group 4 Group 5 Group 6 Group 7 Group 8 Group 9 Group 10 Group 11 Group 12 Group 13 Group 14	
Basic Hourly Rate	Final Benefit	Basic Hourly Rate	Final Benefit
14.46	4.01	12.75	4.10
		15.19	4.10
		15.23	4.10
		15.29	4.10
		15.38	4.10
16.63	4.35	15.59	4.10
16.73	4.35	15.63	4.10
17.07	4.35	15.69	4.10
17.12	4.35	15.73	4.10
17.49	4.35	15.84	4.10
		15.88	4.10
		16.19	4.10
		16.33	4.10
		16.49	4.10
		16.63	4.10
16.75	3.96		
16.85	3.96		
17.19	3.96		
17.24	3.96		
17.61	3.96		
		17.06	3.64
		17.11	3.64
		17.16	3.64
16.97	3.87	17.23	3.64
17.08	3.87	17.33	3.64
17.09	3.87	17.37	3.64
18.02	3.87	17.38	3.64
18.07	3.87	17.44	3.64
18.67	3.87	17.49	3.64
		17.51	3.64
		17.54	3.64
		17.64	3.64
		17.66	3.64
		17.70	3.64
		17.82	3.64
		17.86	3.64
		17.98	3.64
		18.03	3.64
		18.13	3.64
		18.23	3.64
		18.33	3.64
		18.51	3.64
		18.63	3.64
		12.00	3.64
		15.25	3.64

WELDERS: Receive rate prescribed for craft performing operation to which welding is incidental.

Where Pacific County is stated as "Northern Portion" or "Southern Portion" such areas are defined as follows:

Pacific County (northern portion) - North of Wahkiakum County northern boundary extended due west to the Pacific Ocean

Pacific County (southern portion) - South of Wahkiakum County northern boundary extended due west to the Pacific Ocean

#### FOOTNOTES:

- a. Employer contributes 8% of basic hourly rate for over 5 years service and 6% of basic hourly rate for 5 months' to 5 years' service as Vacation Pay Credit. Seven Paid Holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; Friday after Thanksgiving Day; and Christmas Day.
- b. Two weeks' vacation with pay after 1 year employment. Also seven Paid Holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; Friday after Thanksgiving Day; and Christmas Day.
- c. 4% of all gross wages to be placed to the credit of the employee with less than one (1) year's service - 6% of all gross wages to be placed to the credit of the employee with more than one (1) year of service.
- d. Employees shall be paid 60% of the basic hourly rate plus full fringe on projects with a total value, including the cost of utilities, of less than \$1 million; or on projects which involve work on buildings, bridges, or docks, and which meet both of the following criteria:
  - (a) The total cost of the project is less than \$1.5 million excluding the cost of underground utilities which are located 5 ft or more outside or away from the building, bridge, or dock, and which are incidental or subordinate to it. "Utilities" are facilities for electricity, water, gas, sewerage (including storm), and communications.
  - (b) Work on buildings, bridges, or docks shall constitute 20% or more of the cost of the project.

#### e. LABORERS (AREA 1), POWER EQUIPMENT OPERATORS (AREA 1) & TRUCK DRIVERS (AREA 1):

All Counties and portions of Counties East of the 120th Meridian except DOE Hanford Site in Benton and Franklin Counties

All projects involving any or all components listed below, the dollar value of which is equal to or less than the amounts shown shall receive 80% of the base rate plus full fringe benefits:

Paving	\$ 75,000
Crushing	200,000
Grading & Clearing	350,000
Bridges & Related Work	500,000
Utilities	Unlimited
Buildings	2,000,000 (exclusive of mechanical & electrical subcontractors)

EXCEPTION: Paving within 45 mile radius of Spokane or Lewiston shall receive full rate. For work that exceeds the amounts shown above, full rates as specified below shall apply Eastern Washington private works language

#### AREA and ZONE DESCRIPTIONS

##### ASBESTOS WORKERS:

Area 1: Chelan, Clallam, Douglas, Grays Harbor, Island, Jefferson, King, Kitsap, Kittitas, Lewis, Mason, and Okanogan Counties; Pacific, Pierce, San Juan, Skagit, Snohomish, Thurston, Whatcom, and Yakima Counties  
 Area 2: Clark, Cowlitz, and Klickitat Counties; Pacific County (southern portion); Skamania and Wahkiakum Counties  
 Area 3: Remaining Counties

##### BRICKLAYERS; MARBLE SETTERS:

Area 1: Adams County (except City of Othello); Asotin, Columbia, Ferry, Garfield, Lincoln, Pend Oreille, Spokane, and Stevens Counties; Grand Coulee Dam Area in Okanogan County; and Whitman County  
 Area 2: Benton, Franklin, and Walla Walla Counties  
 Area 3: Chelan, Douglas and Grant Counties; Okanogan County (except area of Grand Coulee Dam); and the portion of Adams County that includes the City of Othello  
 Area 4: Clallam, Island, Jefferson, King, Kitsap, and Snohomish  
 Area 5: Clark and Cowlitz Counties; Pacific County (southern portion); Skamania and Wahkiakum Counties, and ten mile strip bordering the Columbia River in Klickitat County  
 Area 6: Kittitas and Yakima Counties; Klickitat County (except a ten mile strip bordering the Columbia River)



## AREA AND ZONE DESCRIPTIONS (Cont'd)

## BRICKLAYERS; MARBLE SETTERS:

- Area 1: Adams County (except City of Othello); Asotin, Columbia, Ferry, Garfield, Lincoln, Pend Oreille, Spokane, and Stevens Counties; Grand Coulee Dam Area in Okanogan County; and Whitman County
- Area 2: Benton, Franklin, and Walla Walla Counties
- Area 3: Chelan, Douglas and Grant Counties; Okanogan County (except area of Grand Coulee Dam); and the portion of Adams County that includes the City of Othello
- Area 4: Clallam, Island, Jefferson, King, Kitsap, and Snohomish
- Area 5: Clark and Cowlitz Counties; Pacific County (southern portion); Skamania and Wahkiakum Counties; and ten mile strip bordering the Columbia River in Klickitat County
- Area 6: Kittitas and Yakima Counties; Klickitat County (except a ten mile strip bordering the Columbia River)
- Area 7: Grays Harbor, Lewis, and Mason Counties; Pacific County (northern portion); Pierce and Thurston Counties
- Area 8: San Juan, Skagit and Whatcom

## CARPENTERS:

- Area 1: All Counties and parts of Counties east of the 120th Meridian except the counties in areas 4 and 5
- Area 2: All Counties and parts of Counties west of the 120th Meridian except the counties in areas 3, 4 and 5
- Area 3: Clark, Cowlitz, and Klickitat Counties; Pacific County (southern portion); Skamania and Wahkiakum Counties
- Area 4: DOE Hanford Site in Benton and Franklin Counties
- Area 5: Chelan, Kittitas, Yakima, Okanogan and the Western parts of Douglas and Grant Counties

## CEMENT MASONS:

- Area 1: Adams and Asotin Counties; Benton and Franklin Counties (except DOE Hanford Site); Chelan, Columbia, Douglas, Ferry, Garfield, and Grant Counties; Kittitas County (except western portion lying one mile west of the City of Easton); Lincoln, Okanogan, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman, and Yakima Counties
- Area 2: Clallam, Grays Harbor, and Jefferson Counties; King County (southern portion); Kitsap County; Kittitas County (western portion lying one mile west of the City of Easton); Lewis and Mason Counties; Pacific County (northern portion); Pierce and Thurston Counties
- Area 3: Island, San Juan, Skagit, and Snohomish Counties; King County (northern portion); Whatcom County

## AREA AND ZONE DESCRIPTIONS (Cont'd)

## CEMENT MASONS (Cont'd):

- Area 4: Clark, Cowlitz, and Klickitat Counties; Pacific County (southern portion); Skamania and Wahkiakum Counties
- Area 5: DOE Hanford Site in Benton and Franklin Counties

## GROUP DESCRIPTIONS FOR CEMENT MASONS - AREAS 1 and 5

- Group 1: Journeyman Cement Mason, includes but not limited to: Rodding, Tamping, Floating, Troweling, Patching, Stoning, Rubbing, Sack Pulbing; All exposed aggregate finishing, setting of Screeds, Scream Forms, Curb and gutter and sidewalk forms, Preparation of all concrete for caulking of the joints and the caulking of expansion joints, Preparation of concrete for the application of hardeners, sealers and curing compounds and their application; Grouting and dry packing of Machine Base; Removal of Snap Ties and She-Bolts prior to patching of concrete
- Group 2: Power Troweling Machine Operator; Troweling of Magnesite, Torogonal or material with epoxy base or erychloride base; All power Grinders, Brushing Hammer, Chipping Gun, Gunite Nozzleman; All sandblasting for architectural finishes and exposing of aggregate for finish; Concrete sawing and cutting for expansion joints and scoring for decorative patterns; Operating of Clary-type Floats, Longitudinal Floats, Rodding Machines and Belting Machines; Scarifiers
- Group 3: Grinding, Brushing or Chipping of Toxic materials or high density concrete; Operating power tools on a scaffold

## DRYWALL &amp; ACOUSTICAL WORKERS:

- Area 1: Clark, Cowlitz, Klickitat, southern portion of Pacific County, Skamania, Wahkiakum County

## ELECTRICIANS:

- Area 1: Adams, Ferry, Lincoln, Pend Oreille, Spokane, Stevens, and Whitman Counties
- Area 2: Asotin, Benton, Columbia, Franklin, Garfield, Kittitas, Walla Walla, and Yakima Counties
- Area 3: Chelan, Douglas, Grant, and Okanogan Counties
- Area 4: Clallam, Jefferson, King, and Kitsap Counties
- Area 5: Clark, Klickitat, and Skamania Counties
- Area 6: Cowlitz and Wahkiakum Counties
- Area 7: Grays Harbor, Lewis, Mason, Pierce, Pacific, and Thurston Counties
- Area 8: Island, San Juan, Skagit, Snohomish, and Whatcom Counties

## AREA DESCRIPTIONS (Cont'd)

## ELECTRONIC TECHNICIANS:

(Installation and repair of low-voltage communication and alarm systems, excluding any work under the jurisdiction of a journeyman wireman):

Area 1: Adams, Ferry, Lincoln, Pend Oreille, Spokane, Stevens, and Whitman Counties

Area 2: Clallam, Jefferson, King, and Kitsap Counties

## ELEVATOR CONSTRUCTORS:

Area 1: Adams, Asotin, Benton, Columbia, Douglas, Ferry, Franklin, Garfield, Grant, Lincoln, Okanogan, Pend Oreille, Spokane, Stevens, Walla Walla, and Whitman Counties

Area 2: Chelan, Clallam, Grays Harbor, Island, Jefferson, King, Kitsap, Kittitas, Lewis, and Mason Counties; Pacific County (northern portion); Pierce, San Juan, Skagit, Snohomish, Thurston, Whatcom, and Yakima Cos.

Area 3: Clark, Cowlitz, and Klickitat Counties; Pacific County (southern portion); Skamania and Wahkiakum Counties

## GLAZIERS:

Area 1: Adams County (northeastern portion); Ferry County; Lincoln County (eastern half); Pend Oreille, Spokane, and Stevens Counties

Area 2: Adams County (southeastern portion); Benton, Columbia, Franklin, and Walla Walla Counties

Area 3: Adams County (southwestern corner); Chelan, Douglas, and Grant Counties; Lincoln County (western half); and Okanogan County

Area 4: Asotin, Garfield, and Whitman Counties

Area 5: Clallam, Island, Jefferson, Grays Harbor, King, Kitsap, Lewis, and Mason Counties; Pacific (northern portion); Pierce, San Juan, Skagit, Snohomish, Thurston, and Whatcom Counties

Area 6: Yakima and Kittitas Counties

Area 7: Clark, Cowlitz, and Klickitat Counties; Pacific County (southern portion); Skamania and Wahkiakum Counties

## LATHERS:

Area 1: Clallam, Island, Jefferson, King, Kitsap, and Lewis Counties; Pacific County (northern portion); Pierce, San Juan, Skagit, Snohomish, and Whatcom Counties

Area 2: Clark, Cowlitz, and Klickitat Counties; Pacific County (southern portion); Skamania and Wahkiakum Counties

## MASON TENDERS:

Area 1: Clark, Cowlitz, and Klickitat Counties; Pacific County (southern portion); Skamania and Wahkiakum Counties

## AREA DESCRIPTIONS (Cont'd)

## PAINTERS:

Area 1: Adams and Asotin Counties; Benton and Franklin Counties (except DOE Hanford Site); Chelan, Columbia, Douglas, Ferry, Garfield, Grant, Kittitas, Lincoln, Okanogan, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman and Yakima Counties

Area 2: Clark, Cowlitz, and Klickitat Counties; Pacific County (southern portion); Skamania and Wahkiakum Counties

Area 3: Clallam, Grays Harbor, Island, Jefferson, King, Kitsap, Lewis, Mason, Pierce, San Juan, Skagit, Snohomish, and Thurston Counties; Pacific County (northern portion); and Whatcom County

Area 4: Statewide except (Clark, Cowlitz, and Klickitat Counties; Pacific County (southern portion); Skamania and Wahkiakum Counties)

Area 5: DOE Hanford site in Benton and Franklin Counties

## PLASTERERS:

Area 1: Adams, Asotin, Benton, Chelan, Columbia, Douglas, Ferry, Franklin, Garfield, Grant, Kittitas, Lincoln, Okanogan, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman, and Yakima Counties

Area 2: Clallam, Grays Harbor, Island, Jefferson, King, Kitsap, Lewis, and Mason Counties; Pacific County (northern portion); Pierce, San Juan, Skagit, Snohomish, Thurston, and Whatcom Counties

Area 3: Clark, Cowlitz, and Klickitat Counties; Pacific County (southern portion); Skamania and Wahkiakum Counties

## PLASTERERS' TENDERS:

Area 1: All Counties and portions of Counties east of the 120th Meridian

## PLUMBERS:

Area 1: Chelan County; Kittitas County (north of 47°15' N. Lat.); Douglas County (west of the 119°30' W. Long.); Okanogan County (except the area lying east of the 119°31' W. Long., North to 48°30' N. Lat.)

Area 2: Adams County (southern portion); Asotin County (except the City of Clarkston); Benton, Columbia, Franklin, Garfield, Grant, Klickitat, Walla Walla, and Yakima Counties; Douglas County (east of 119°30' W. Long.); Ferry County (west of a line drawn from Creston in Lincoln County northward to the Canadian Border); Kittitas County (south of 47°15' N. Lat.); Lincoln County (west of a line drawn from Schrag in Adams County northward to the Ferry County Line); and Okanogan County (east of 119°30' W. Long. and south of 48°30' N. Lat.)

Area 3: Adams County (northern portion including the City of Ritzville); Asotin County (City of Clarkston only); Cowlitz County; Ferry County (east to a line drawn from Creston in Lincoln County northward to the Canadian Border); Grays Harbor, Island, Kitsap, and Lewis Counties; Lincoln County (east of a line drawn from Schrag in Adams County northward to the Ferry County Line); Mason, Pend Oreille, Pierce, Skagit, Snohomish, Spokane, Stevens, Thurston, Wahkiakum, Whatcom, Whitman, Clark, and Skamania Counties (those portions lying north of a east-west line drawn through Woodland eastward to the Klickitat County Line)

Area 4: Clark and Skamania Counties south of an east-west line drawn through Woodland eastward to the Klickitat County Line

Area 5: Clallam, King, and Jefferson Counties; and all Dam Sites on the Skagit River in Whatcom County

## AREA DESCRIPTIONS (Cont'd)

## ROOFERS:

- Area 1: Adams, Asotin, Chelan, Columbia, Douglas, Ferry, Garfield, Grant, Lincoln, Okanogan, Pend Oreille, Spokane, Stevens, Walla Walla, and Whitman Counties  
 Area 2: Benton, Franklin, Kittitas, Klickitat and Yakima Counties  
 Area 3: Clallam, Jefferson, King, Kitsap, Mason, and Snohomish Counties  
 Area 4: Cowlitz, Grays Harbor, Lewis, Pacific, Pierce, Thurston, and Wahkiakum Counties  
 Area 5: Island, San Juan, Skagit, and Whatcom Counties  
 Area 6: Clark and Skamania Counties

## SHEET METAL WORKERS:

- Area 1: Adams, Asotin, Chelan, Douglas, Ferry, Grant, Lincoln, Okanogan, Pend Oreille, Spokane, Stevens, and Whitman Counties  
 Area 2: Clallam, Jefferson, Kitsap, and Mason Counties  
 Area 3: Clark and Skamania Counties  
 Area 4: Cowlitz, Grays Harbor, Lewis, Pacific, Pierce, Thurston, and Wahkiakum Counties  
 Area 5: King, Kittitas, Island, and Snohomish Counties  
 Area 6: Whatcom, Skagit, and San Juan Counties  
 Area 7: Benton, Columbia, Franklin, Garfield, Klickitat, Walla Walla, and Yakima Counties

## SOFT FLOOR LAYERS:

- Area 1: Adams County (northeastern portion); Ferry County; Lincoln County (eastern half); Pend Oreille, Spokane, and Stevens Counties  
 Area 2: Adams County (southeastern portion); Benton, Columbia, Franklin, and Walla Walla Counties  
 Area 3: Adams County (southwestern portion); Chelan, Douglas, and Grant Counties; Lincoln County (western half); Okanogan County  
 Area 4: Asotin, Garfield, and Whitman Counties  
 Area 5: Island, King, Kitsap, Skagit, Snohomish and Whatcom  
 Area 6: Clark, Cowlitz, and Klickitat Counties; Pacific County (southern portion); Skamania and Wahkiakum Counties  
 Area 7: Grays Harbor, Lewis, and Mason Counties; Pacific County (northern portion); Pierce and Thurston Counties  
 Area 8: Yakima and Kittitas County

## SPRINKLER FITTERS:

- Area 1: Skagit, Snohomish, King, Island, Kitsap, Pierce, and Thurston Counties  
 Area 2: Remaining Counties

## TERRAZZO WORKERS; TILE SETTERS:

- Area 1: Adams County (except that portion which includes the City of Othello); Asotin, Columbia, Ferry, Garfield, Lincoln, Pend Oreille, Spokane, Stevens, and Whitman Counties, and Grand Coulee Dam area in Okanogan County  
 Area 2: Benton, Franklin, and Walla Walla Counties  
 Area 3: Chelan, Douglas, Grant, Okanogan County (except area of Grand Coulee Dam), and the portion of Adams County that includes the City of Othello)

## AREA DESCRIPTIONS (Cont'd)

## TERRAZZO WORKERS; TILE SETTERS: (Cont'd)

- Area 4: Clallam, Island, Jefferson, King, Kitsap, San Juan, Skagit, Snohomish, and Whatcom Counties  
 Area 5: Clark and Cowlitz Counties; Pacific County (southern portion); Skamania and Wahkiakum Counties, and a ten-mile strip bordering the Columbia River in Klickitat County  
 Area 6: Kittitas, Klickitat (except 10 mile strip bordering the Columbia River), and Yakima Counties  
 Area 7: Grays Harbor, Lewis, Mason, Pierce, and Thurston Counties

## TILE, MARBLE, and TERRAZZO FINISHERS:

- Area 1: All Counties west of the Cascade Mountain Range (except Clark, Cowlitz, and Klickitat Counties; Pacific County (southern portion); Skamania and Wahkiakum Counties  
 Area 2: Clark and Cowlitz Counties; Pacific County (southern portion); Skamania and Wahkiakum Counties, and a ten-mile strip bordering the Columbia River in Klickitat County  
 Area 3: Adams County (except that portion which includes the City of Othello); Asotin, Columbia, Ferry, Garfield, Lincoln, Pend Oreille, Spokane, Stevens, and Whitman Counties, and Grand Coulee Dam area in Okanogan County

## ZONE DESCRIPTIONS (AREA 3) ONLY

LABORERS,  
POWER EQUIPMENT AND TRUCK DRIVERS  
Astoria, Bingen, Goldendale, The Dalles, Longview, Portland  
and Vancouver

- ZONE 1 - all jobs or projects located within 30 miles of the respective City Hall  
 ZONE 2 - more than 30 miles but less than 40 miles from the respective City Hall  
 ZONE 3 - more than 40 miles but less than 50 miles from the respective City Hall  
 ZONE 4 - more than 50 miles but less than 80 miles from the respective City Hall  
 ZONE 5 - more than 80 miles from the respective City Hall

## LABORERS (AREA 1)

All Counties and portions of Counties East of the 120th Meridian  
(Except DOE Hanford Site in Benton and Franklin Counties)

## BUILDING, HEAVY, and HIGHWAY CONSTRUCTION

Group 1: Brush Hog Feeder; Carpenter Tender; Concrete Crewman (to include Stripping of form, hand operating jacks on all form construction, application of concrete curing compounds, Pumpcrete Machine, Signaling, handling the nozzle of Squeezcrete or similar machine - 6 in. and smaller); Crusher Feeder; Demolition (to include clean-up, burning, loading, wrecking and salvage of all material); Dumpman; Fence Erector (to include: Guard Rail, Guide and Reference Post, Sign Posts, and Right-of-way Markers); General Laborer; Grout Machine Tender; Nipper; Riprap Man; Scaffold Erector, wood or steel; Scaleman; Stake Jumper; Structural Mover (to include separating foundation, preparation, cribbing, shoring, jacking and unloading of structures); Tailhoseman (water nozzle); Timber Bucker and Faller (by hand); Truck Loader; Well-point Man; Window Cleaner; Miner Class "A" - Bull Gang, Pumpcrete Crewman including Distribution Pipe, Assembling and Dismantle and Nipper; Track Laborer; Railroad Equipment, power driven; Dual Mobile Power Spiker or Puller

Group 2: Asphalt Raker; Asphalt Roller, walking; Cement Finisher Tender; Cement Handler; Concrete Saw, walking; Demolition Torch; Dope Pot Fireman, non-mechanical; Driller Tender (when required to move and position machine); Form Cleaning Machine Feeder; Stacker; Form Setter, paving; Grade Checker using level; Jackhammer Operator; Nozzleman (to include Squeeze and Flowcrete Nozzle); Nozzleman, water, air or steam; Pavement Breaker; Pipelayer, corrugated metal culvert; Pipelayer, multi-section; Pot Tender; Powderman Tender; Power Buggy Operator; Power Tool Operator, gas, electric, pneumatic; Rodder and Spreader; Sandblast Tailhoseman; Tamper (to include operation of Barco, Essex and similar Tamper, and Pavement Breaker); Trencher, Shawnee Tugger Operator; Vibrator, under 4 inches; Wagon Driller; Water Pipe Liner; Wheelbarrow, power driven; Miner Class "B" - Brakeman, Finisher, Vibrator and Form Setter

Group 3: Air Track Driller; Brush Machine (to include: Horizontal Construction Joint Clean-up Brush Machine, power propelled); Calson Worker, free air, Chain Saw Operator and Faller; Concrete Stack (to include: Laborers when 40 ft. high); Gunnite (to include: operation of machine and nozzle); High Scaler; Hot Carrier; Laser Beam Operator (to include: Grade Checkers and Elevation control); Monitor Operator (track or similar mounting); Mortar Mixer; Nozzleman (to include: Jet Blasting Nozzleman, over 1,200 lbs., Jet Blast Machine, power propelled, Sandblast Nozzle); Pipelayer (to include: working Topman, Caulker, Collarman, Joiner, Mortarman, Rigger, Jacker, Shorer, Valve or meter Installer); Pipewrapper; Vibrator, 4 inches and over; Miner Class "C" - Miner and Nozzleman for concrete and Laser Beam Operator in Tunnels

Group 4: Drills with dual masts; Powderman; Miner Class "B" - Raise and Shaft Miner and Laser Beam Operator on Raises and Shafts; Powderman receives \$0.25 an hour additional

LABORERS (Cont'd)  
AREA 2

All Counties and portions of Counties West of the 120th Meridian including the portions of Chelan, Douglas, Kittitas, Okanogan, and Yakima that lie West of the 120th Meridian, and the Northern part of Pacific County, but excluding those portions contained in Area 3

Group 1: Fence Laborer; Window Washer  
Group 2: Batch Weighman, Crusher Feeder, Pilot Car, Toolroom Man (at job site)  
Group 3: General Laborer; Air, Gas or Electric Vibrating Screeds; Ballast Regulator Machine; Carpenter Tender; Chipping Gun; Chuck Tender; Concrete Form Stripper; Cement Finisher Tender; Curing Laborer; Demolition, Wrecking and Moving including Chaired Material, Epoxy Technician; Gabion Basket Builders; Grinders; Pot Tender; Powderman's Tender, Stake Hopper; Topman-Tailman; Tugger Operator  
Group 4: Cement Dumper-Paving; Clay Power Spreader; Concrete Saw Operator; Faller and Buckler Chain Saw; Grade Checker; High Scaler; Jackhammer; Manhole Builder; Mortarman and Rodcarrier; Nozzleman (concrete pump, green cutter when using combination of high pressure air & water on concrete and rock, sandblast, gunnite, shotcrete) water blaster; Pavement Breaker; Pipe Layer & Caulker; Pipe reliner (not insert type); Railroad Spike Puller (Power); Raker - Asphalt; Spreader (concrete); Timberman-Sawer (lagger, shorer & cribber); Track Liner (power); Tamper (multiple and self-propelled); Tamper & Similar Electric, Air & Gas operated tools; Vibrator; Wagon Driller & Air Track Operator; Well Point Laborer  
Group 5: Calson Worker; Miner; Powderman; Re-Timberman

LABORERS (Cont'd)  
AREA J

Clark, Cowlitz, Klickitat, Skamania, and Multnomah Counties, and the Southern portion of Pacific County

Group 1: General Laborers; Asphalt Plant Laborers; Asphalt Spreaders; Batch Weighman; Bronco; Brush Burners and Cutters; Car and Truck Loaders; Carpenter Tenders; Changehouse Man or Dry Black Man; Choke Setter; Clean-up Laborers; Concrete Laborers; Culvert, hand labor; Curing, concrete; Demolition, wrecking and moving Laborers; Drillers' Tenders; Dumpers, road oil crew; Dumpman (for grading crew); Fine Graders; Form Strippers (not swinging stages); Guard Rail, Median Rail, Reference Post, Guide Post, Right-of-Way Marker; Leverman or Aggregate Spreader (Flaherty and similar types); Loading Spotters; Material Yard Man (including electrical); Powderman Tender; Pittsburgh Chipper Operator or similar types; Ribbon Setters (including steel forms); Rip Rap Man (hand placed); Road Pump Tender; Sewer Labor; Signalman; Skipman; Slicer; Sprayman; Stake Chasers; Stockpiler; Timber Faller and Buckler (hand labor); Toolroom Man (at job site); Tunnel Bull Gang (above ground); Weightman - Crusher (aggregate when used); Railroad Track Laborers

Group 2: Applicator (including Pot Tender for same) applying protective material by hand or nozzle on utility lines or storage tanks on project; Brush Cutters (power saw); Burners; Choker Splicers; Clary, power spreader and similar types; Cleanup Nozzlemen-Greencutter (concrete, rock, etc.); Concrete power Buggymen; Crusher Feeder; Demolition and wrecking charred materials; Grade Checker; Gunite Nozzlemen Tender; Gunite and Sandblasting Pot Tender; Handlers or Mixers of all materials of an irritating nature (including cement and lime); Power Tool Operators, includes but not limited to: Dry Pack Machine, Jackhammer, Chipping Guns, Paving Breakers, Vibrators (less than 4" in diameter); Post Hole Digger, air, gas or electric; Vibrating Screed; Tampers; Ribbon Setter, hand; Rip Rap Man, hand, hand placed; Sand Blasting (wet); Stake Gutter; Tunnel-Huckers; Brakeman; Concrete Crew; Bull Gang (underground)

Group 3: Asphalt Rakers; Bit Grinder; Drill Doctor; Drill Operators; Air Tracks; Cat Drills; Wagon Drills; Rubber - mounted Drills and other similar types; Concrete Saw Operator; Gunite Nozzlemen; High Scalers; Strippers and Drillers (covers work in swinging stages, chairs or belts, under extreme conditions unusual to normal drilling, blasting, barring-down or sloping and stripping); Laser team (pipe laying); Applicable when employee assigned to move, set up, align Laser Beam; Manhole Builder; Powderman; Power Saw Operators (bucking and felling); Purplecrete Nozzlemen; Sandblasting (dry); Sewer (Pipe Layers); Sewer Timbermen; Track Liners; Anchor Machines; Ballast Regulators, multiple Tampers, Power Jacks; Tugger Operator; Tunnel Chuck Tenders; Nippers and Timbermen; Vibrators (4" and larger); Water Blaster; Welder

Group 4: Laser Beam (tunnel) - Tunnel Miners; Tunnel Powdermen

Group 5: Fence Builder

LABORERS (Cont'd)  
AREA A

DOE Hanford Site in Benton and Franklin Counties

Group 1: Brush Hog Feeders; Carpenter Tender; Concrete Crewman (to include: Stripping of forms, hand operating jacks on slip form construction, application of concrete curing compounds, Pumcrete Machine, Signaling, handling the Nozzle of Squeezcrete or similar machine - 6 in. and smaller); Crusher Feeder; Demolition (to include: clean-up, burning, loading, wrecking and salvage of all material); Dumpman; Fence Erector (to include: Guard Rail, Guide and reference Post, Sign Posts, and Right-of-way Markers); General Laborer; Grout Machine Tender; Nippers; Riprap Man; Scaffold Erector, wood or steel; Scaleman; Stake Jumper; Structural Mover (to include: separating foundation, preparation, cribbing, shoring, jacking and unloading of structures); Tailhoseman (water nozzle); Timber Buckler and Faller (by hand); Truck Loader; Wellpoint Man; Window Cleaner; Miner Class "A" - Bull Gang, Pump Crete Crewman including Distribution Pipe, Assembling and Dismantle and Nipper

Group 2: Asphalt Raker; Asphalt Roller, walking; Cement Finisher Tender; Cement Handler; Concrete Saw, walking; Demolition Torch; Dope Pot Fireman, non-mechanical; Driller Tender (when required to move and position machine); Form Cleaning Machine Feeder; Stacker; Form Setter, paving; Grade Checker using level; Jackhammer Operator; Nozzlemen (to include: Squeez and Flow-crete Nozzle); Nozzlemen, water, air or steam; Pavement Breaker; Pipelayer, corrugated metal culvert; Pipelayer, multi-section; Pot Tender; Powderman Tender; Power Buggy Operator; Power Tool Operator, gas, electric, pneumatic; Rodder and Spreader; Sandblast Tailhoseman; Taper (to include: operation of Barco, Essex and similar Tampers, and Pavement Breakers); Trencher, Shawnee; Tugger Operator; Vibrator, under 4 inches; Wagon Drills; Water Pipe Liner; Wheelbarrow, power driven; Miner Class "B" - Brakeman, Finisher, Vibrator and Form Setter

Group 3: Air Track Drill; Brush Machine (to include: Horizontal Construction Joint Clean-up Brush Machine, power propelled); Calson Worker, free air, Chain Saw Operator and Faller; Concrete Stack (to include: Laborer when 40 ft. high); Gunite (to include: operation of machine and nozzle); High Scalers; Hod Carrier; Laser Beam Operator (to include: Grade Checkers and Elevation control); Monitor Operator (track or similar mounting); Mortar Mixer; Nozzlemen (to include: Jet Blasting Nozzlemen, over 1,200 lbs., Jet Blast Machine, power propelled, Sandblast Nozzle); Pipelayer (to include: working Topman, Caulker, Collarman, Joiner, Mortarman, Rigger, Jacker, Shorer, Valve or water installer); Pipewrapper; Vibrator, 4 inches and over; Miner Class "C" - Miner and Nozzlemen for concrete and Laser Beam Operator in Tunnels

Group 4: Drills with dual masts; Miner Class "D" - Raise and Shaft Miner and Laser Beam Operator on Raises and Shafts

Group 5: Powderman

## POWER EQUIPMENT OPERATORS

## (AREA 1)

All Counties and portions of Counties East of the 120th Meridian  
(Except DOE Hanford Site in Benton and Franklin Counties)

Group 1: Bit Grinder; Bolt Threading Machine; Compressor, under 2,000 cu. ft. per minute, gas, diesel or electric power; Crusher Feeder (mechanical); Backhoe; Driller's Tender; Fireman and Heater Tender; Grade Checker; Tender (Mechanic, H.D.); Oiler, Oiler and Cable Tender; Mucking Machine; Pumpman; Rollers, all types on subgrade (farm type, Case, John Deere and similar - or Compacting or Vibrator) except when pulled by Dozer with operable blade; Steam Cleaner; Welding Machine; Hydro-seeder

Group 2: A-Frame Truck (single-drum); Assistant Refrigeration Plant (under 1,000 tons); Assistant Plant Operator; Fireman or Pugmiser (asphalt); Bagley or Stationary Scraper; Belt Finishing Machine; Blower Operator (cement); Cement Hog; Compressor (2,000 cu. ft. or over, 2 or more, gas, diesel or electric power); Concrete Saw multiple cut; Distributor Leverman; Elevator hoisting materials; Dope Pots (power agitated); Fork lift or Lumber Stacker; Hydralift and similar; Gin Trucks (Pipeline); Hoist, single drum; Loader (Bucket, Elevator and Conveyors); Longitudinal Float; Mixer (portable - concrete); Pavement Breaker; Hydra Hammer and similar; Power Broom; Spray Curling Machine (concrete); Spreader Box (self-propelled); Straddle Buggy (Ross and similar on construction job site); Tractor (farm type R/T with attachments except Backhoe); Tugger Operator; Ditch Witch or similar

Group 3: A-Frame Truck (2 or more drums); Assistant Refrigeration Plant and Chiller Operator (over 1,000 tons); Backfillers (Cleveland and similar); Beltpack Conveyors with power pack or similar; Belt Loader (Kocal or similar); Batch Plant and Wet Mix Operator, single unit (concrete); Bending Machine; Boring Machine (earth); Boring Machine (rock under 8" bit) (Quarry Master, Joy or similar); Bump Cutter (Wayne, Saginaw or similar); Canal Lining Machine (concrete); Chipper (without crane); Cleaning and Doping Machine (Pipeline); Elevating Belt-type Loader (Euclid, Barber Green or similar); Elevating Grader-type Loader (Dumort, Adams or similar); Generator Plant Engineers (diesel, electric); Guniting Combination Mixer and Compressor; Mixer-Mobile; Mucking Machines; Soil Stabilizer (P & H or similar); Spreader Machine; Pump; Tractor to D-6 or equivalent and Tractor; Transverse Finish Machine; Turnhead Operator

Group 4: Blade Operator (Motor Patrol and attachments); Concrete Pump (Squeeze-crete, Flow-crete, Pump-crete, Whitman and similar); Drills (Churn, Core, Calyx, or Diamond); Equipment Serviceman, Greaser and Gilder; Hoist (2 or more drums or Tower Hoist); Loaders Overhead and Front-end, under 4 yds. R/T; Pave or Curb Extruders (asphalt or concrete); Refrigeration Plant Engineers (under 1,000 tons); Rubber-tired Skidders (R/T with or without attachments); Surface Master and Planer Machine; Trenching Machines (under 7 ft. depth capacity); Turnhead (with or without screening); Vacuum Drill (Reverse Circulation Drill, under 5" bit)

## POWER EQUIPMENT OPERATORS

## AREA 1 (Cont'd)

Group 5: Backhoe (under 1 yard); Crane (25 tons and under); Derrick and Stifflegs (under 15 tons); Drilling Equipment (8" bit and over) (Hobbs, Reverse Circulation and similar); Hoe Ram; Piledriving Engineers; Paving (dual drum); Refrigeration Plant Engineer (1,000 tons and over); Signalman (Whitelys, Highline, Hammerheads or similar)

Group 6: Asphalt Plant Operator; Automatic Subgrader (Ditches and Trimmers (Autograde, ABC, R.A. Hansen and similar on grade wire); Backhoes (1 yard to 3 yards); Batch Plant (over 4 units); Batch and Wet Mix Operator (multiple units, 2 and including 4); Blade (finish and Bluetop) (Automatic, CHI, ABC, and similar when used as automatic); Boat Operator; Boom Cats (side); Cableway Controller (Dispatcher); Clamshell Operator (under 3 yds.); Concrete Slip Form Paver; Cranes (over 25 tons including 45 tons); Crusher, Grizzly and Screening Plant Operator; Draglines (under 3 yards); Drill Doctor; H.D. Mechanic; H.D. Welder; Loader Operator (Front-end and Overhead, 4 yards including 8 yards); Multiple Dozer Units with single blade; Quad-track or similar equipment; Roller (finishing pavement); Rubber-tired Scrapers (one motor with one scraper, under 40 yards); Rubber-tired Scrapers, Multiple-engine power with one scraper (Euclid, TS 24 and similar); Rubber-tired Scraper, one motor with one scraper (40 yards and over); Rubber-tired Scraper, multiple engines with two scrapers; Scraper Operator (Euclid (under 3 yards); Tractors (D-6 and equivalent and over); Trenching Machines (7 feet depth and over, and screw operator

Group 7: Backhoe (3 yards and over); Cableway Operators; Clamshell Operator (3 yards and over); Cranes (over 45 tons to 85 tons); Derricks and Stifflegs (65 tons and over); Draglines (3 yards and over); Elevating Belt (Holland type); Loader 160 degrees revolving Koehring Scooper or similar; Loaders (Overhead and Front-end, over 8 yards to 10 yards); Rubber-tired Scrapers (multiple engine with three or more Scrapers); Shovels (3 yards and over); Whitelys and Hammerheads, all

Group 8: Cranes (85 tons and over, and all climbing, rail and tower); Loaders (Overhead and Front-end, 10 yards and over); Helicopter Pilot

## AREA 2

All Counties and portions of Counties West of the 120th Meridian  
(Except those enumerated in Area 1)

Group 1: Cranes, 100 tons and over or 200' of boom including jib and over; Loaders, 8 yds. and over; Shovels and attachments, 6 yds. and over

Group 2: Cableways; Cranes, over 45 tons up to 100 tons or over 150' including jib; Rollagons; Tower Crane; Helicopter, Winch; Remote Control Operator; Loader, Overhead, 6 yds. up to 8 yds.; Shovels, Backhoes, over 3 yds. to 6 yds.; Slipform Pavers; Scrapers, self-propelled, 45 yds. and over; Quad 9, HD 41, D-10

POWER EQUIPMENT OPERATORS (Cont'd)  
(AREA 2) (Cont'd)

Group 3: Concrete Batch Plant Operator; Bump Cutter; Cranes, 20 tons through 45 tons; Hydraulifts; Chipper; Crushers; Derrick; Drilling Machine; Finishing Machine; Loaders, Overhead, under 6 yds.; Mechanics; Mixers, Asphalt Plant; Motor Patrol Graders, finishing; Pump Truck mounted Concrete Pump with boom attachment; Piledriver Operator; Sceded Man; Shovels, Backhoes 3 yds. and under; Subgrader, Trimmer; Tractors, Backhoes, over 60 HP; Scrapers, Self-propelled, under 45 yds.

Group 4: Brooms; Dosers, D-9 and under; Paydozers; A-Frame Crane; Cranes up to 20 tons; Conveyors; Hoists, Air Tugger; Loaders, elevating type; Fork Lifts; Motor Patrol Grader, non-finishing; Mucking Machine; Concrete Pumps; Rollers, Plant Mix or Multi-lift materials; Saws, Concrete; Scrapers, Carryall; Spreaders, Blow Knox; Trenching Machines; Equipment Service Engineer; Oiler Driver on Truck Cranes over 45 tons; Tractor, Backhoe, 60 HP and under

Group 5: Oiler Driver on Truck Cranes, 45 tons and under; Oil Distributors, blower; Assistant Engineer (formerly Oiler classification); Pavement Breaker; Posthole Digger, mechanical; Power Plant; Wheel Tractors, Farmall type; Compressor; Pumps, water; Rollers, other than plant mix;

Group 6: Gradechecker and Stakeman

## AREA 3

Clark, Cowlitz, Wilkitt, Skamania, and Wahkiakum Counties; and the Southern portion of Pacific County

Group 1: Oiler, including Plant, Crane, Crusher, Guardrail equipment, and Trenching Machine; Assistant Conveyor Operator; Crusher Feeder; Deckhand; Self-propelled Scaffolding Operator; Guardrail Punch Oiler; Pump Operator, under 4"; Brakenan; Switchman; Parts Man (tool room)

Group 2: Blade Operator, pulled type; Truck Crane Oiler - driver, 25 ton capacity or over; Crane Fireman (all equipment except floating); A-Frame Truck Operator, single drum; Tugger or Coffin type Hoist Operator; Driller Tender; Auger; Oiler; Boatman; Fork Lift or Lumber Stacker Operator (on job site); Oiler, combination Guardrail Machine; Temporary Heating Plant Operator; Grade Oiler, required to check grade; Grade Checker; Tar Pot Fireman; Tar Pot Fireman (power agitated); H.D. Repairman Tender; Helicopter Radioman (ground); Roller Operator, grading of base rock (not asphalt)

Group 3: Asphalt Plant Fireman; Pugmill Operator (any type); Truck mounted Asphalt Spreader, with Screeds; Compressor Operator (any power), under 1,250 cu. ft. total capacity; Conveyor Operator; Mixer Box Operator (C.T.B., Dry Batch, etc.); Cement Hog; Concrete Saw; Concrete Curing Machine (riding type); Wire Mat or Brooming Machine; Ross Carrier Operator (on job site); Bucket Elevator Loader, Barber Greene and similar types; Hydraulic Pipe Press; Pump Operator (any power), 4" and over; Hydrostatic Pump; Motorway; Ballast Jack Tamper; Bell Boy, phones, etc.; Tamping Machine, mechanical self-propelled; Hydrographic Seeder Machine, straw, pulp or seed; Broom Operator, self-propelled (on job site); Air Filtration Equipment; Welding Machine Operator

POWER EQUIPMENT OPERATORS (Cont'd)  
AREA 3 (Cont'd)

Group 4: Sced Operator; Compactor, including Vibratory; Compressor (any power) over 1,250 cu. ft. total capacity; Combination Mixer and Compressor, Gunnite Work; Concrete Mixer Operator, single drum, under five bag capacity; Helicopter Hoist Operator; Floating Equipment Fireman; Lull Hi-lift Operator or similar type; Fork Lift, over 5 ton; Service Oiler (Greaser); Hydra Hammer or similar type; Pavement Breaker; Pump Operator, more than 5 (any size); Roller Operator, Oiling, C.T.B.

Group 5: Extrusion Machine; Wagner Factor or similar type (without blade); Concrete Batch Plant Quality Control Operator; Power Jumbo, Setting Slip Forms, etc. in tunnels; Slip Form Pumps, Power driven Hydraulic Lifting Device for concrete forms; Hoist, single drum; Elevator Operator; Pulva-mixer or similar type; Chip Spreading Machine Operator; Lime Spreading (on job site); Sweeper (Wayne type) Self-propelled (on job site); Tractor, rubber-tired 50 H.P. Flywheel and under; Trenching Machine, maximum digging capacity 3 ft. depth

Group 6: Asphalt Burner and Reconditioner; Pavement Grinder and/or Grooving Machine (riding type); Cast-in-place Pipe Laying Machine; Maginnis Internal Pull Slab Vibrator; Concrete Finishing Machine, Clary, Johnson, Ridwell, Burgess Bridge Deck or similar type; Curb Machine, Mechanical Bera, Curb and/or Curb and Cutter; Concrete Joint Machine; Concrete Planer; Concrete Paving Machine; Concrete Spreader; Loaders, rubber-tired type, 24 cu. yds. and under; Rock Spreaders, self-propelled

Group 7: Roller (any asphalt mix); Belcrete; Pumcrete Operator (any type); Fuller-Kenyon and similar; Concrete Pump; Grouting Machine; Concrete Mixer, single drum, five bag capacity and over; Tower Mobile Operator; A-Frame Truck, double drum; Boom Truck; Churn Drill and Earth Boring Machine; Hydraulic Backhoe, wheel type 3/8 cu. yds. and under with or without front end attachments 24 cu. yds. and under (Ford, John Deere, Case type); Elevating Grader, Tractor towed requiring Operator or Grader; Pot Rammer

Group 8: Diesel-electric Engineer, Plant, Crusher, Generator, Floating; Batch Plant and/or wet mix, one and two drum; Generator Operator; Belt Loader, Kolman and Ko Cel types; Asphalt Paver Operator

Group 9: Bulldozer; Drill Cat Operator; Side-boom Cat; Compactor, with blade; Concrete Cooling Machine; Chicago Boom and similar types; Lift Slab Machine; Boom type lifting device, 5 ton capacity or less; Cherry Picker or similar type Crane-hoist, 5 ton capacity or less; Grizzly Crusher; Crusher Plant; Drill Doctor; Boring Machine; Guardrail Punch and Auger (all types); Surface Heater and Planer; Hydraulic Backhoe, track type 3/8 cu. yds.; Loader, Front End and Overhead, 24 cu. yds. and under 4 cu. yds.; Hammer Operator; Pipe Cleaning, Doping, Bending and Wrapping Machines; Bolt-threading Machine; Drill Doctor (bit grinder); H.D. Mechanic Machine Tool Operator; Stationary Drag Scraper; Tractor, rubber-tired over 50 H.P. Flywheel; Tractor with boom attachment; Trench Machine, maximum digging capacity over 3 ft. depth; Asphalt Plant Operator

POWER EQUIPMENT OPERATORS (Cont'd)  
AREA 3 (Cont'd)

Group 10: Bulldozer, twin engine (TC 12 and similar); Cable Flow (any type); Compactor, multi-engine; Jack Operator, Elevating Barges; Barge Operator, self-unloading; Rubber-tired Dozers and Pushers (Michigan, Cat, Hough type); Driller - Percussion, Diamond, Core, Cable, Rotary and similar type

Group 11: Mixer Mobile; Concrete Breaker; Crane Operator, 25 tons and under; Combination Guardrail Machines, i.e., Punch, Auger, etc.; Shovel; Dragline; Clamshell, Hoe, etc., under 1 cu. yd.; Grade-all, under 1 cu. yd.; Mucking Machine (tunnel)

Group 12: Blade Operator; Batch Plant and/or Wet Mix, 3 units or more; Reinforced Tank Batching Machine (K-17 or similar); Hoist, two or more drums; Elevating Loader, Athey and similar; Piledriver (not crane type); Rubber-tired Scraper, single and twin engine; Single Scraper, with Push-pull attachments, self-loader; Paddle wheel, auger type; Blade mounted Spreaders Ulrich and similar types; Shield Operator

Group 13: Blade Operator, finish; Blade, externally controlled by electronic, mechanical hydraulic means; Blade, multi-engine; Concrete Paving Road Mixer; Derrick, under 100 tons; Hoist, Stiff Leg, Guy Derrick or similar, 50 tons and over; Cableway Operator 25 ton and over; Crane, over 25 ton and including 40 tons; Piledriver Operator; Floating Clamshell, etc., under 3 cu. yds.; Floating Crane (Derrick Barge), less than 10 ton; Elevating Grader, operated by tractor operator, Blacra, Euclid, or similar; Back Filling Machine; Shovel, etc. 1 cu. yd. and less than 3 cu. yds.; Grade-all, 1 cu. yd. and over; Bridge Crane Operator

Group 14: Tower Crane Operator; Rubber-tired Scraper, with Tandem Scrapers, self-loading, Paddle Wheel, auger type, finish and/or 2 or more units

Group 15: Rock Bound Operator; Loader, 4 cu. yds., but less than 6 cu. yds.

Group 16: Autograder or "Trimmer"; Tandem Bulldozer, Quad-nine and similar; Automatic Concrete Slip Form Paver; Concrete Canal Line; Cableway, 25 ton and over; Crane, over 40 ton and including 100 ton; Whirley, 80 ton and under; Floating Clamshell, etc., 1 cu. yds. and over; Floating Crane (Derrick Barge) 30 ton but less than 80 ton; Loader, 6 cu. yds., but less than 12 cu. yds.; Rubber-tired Scraper, with Tandem Scrapers, multi-engine; Shovel, etc., 3 cu. yds. but less than 5 cu. yds.; Wheel Excavator, under 750 cu yds. per hour

Group 17: Crane over 100 ton and including 200 ton; Whirley, over 80 ton and including 150 ton; Floating Crane (Derrick Barge), 80 ton, but less than 150 ton; Loader, 12 cu. yds. and over; Shovel, etc., 5 cu. yds. and over; Canal Trimmer

POWER EQUIPMENT OPERATORS (Cont'd)  
AREA 3 (Cont'd)

Group 18: Crane, over 200 ton; Whirley, 150 ton and over; Floating Crane, 150 ton but less than 250 ton; Wheel Excavator, over 750 cu. yds. per hour; Hand wagons, in connection with Wheel Excavator

Group 19: Helicopter, when used in erecting work; Floating Crane, 250 ton and over; Remote controlled earth moving equipment; Underwater equipment, remote or otherwise

## DREDGING

AREA 1 - All Counties and portions of Counties East of the 120th Meridian

AREA 2 - All Counties and portions of Counties West of the 120th Meridian (except those enumerated in Area 3) and the Northern part of Pacific County

Group 1: Assistant Mate (Deckhand)

Group 2: Oiler

Group 3: Assistant Engineer (Electric, Diesel, Steam or Booster Pump); Mate and Boatmen

Group 4: Craneman, Engineer Welder

Group 5: Leverman, Hydraulic

## AREA 3- DREDGING

Clark, Cowlitz, and Klickitat Counties; Pacific County (southern portion); Skamania and Wahkiakum Counties

Group 1: Leverman, Hydraulic

Group 2-A: Leverman, Dipper

Group 2: Assistant Engineer (including Watch Engineer, Mechanic, and Machinist) and Mate

Group 3: Tenderman (Boatman, attending Dredging Plant); Fireman

Group 4: Assistant Mate (Deckhand); Oiler



## POWER EQUIPMENT OPERATORS (Cont'd)

AREA 4

DOE Hanford Site in Benton and Franklin Counties

Group 1: Bit Grinders; Bolt Threading Machines; Compressors (under 2,000 CFM, gas, diesel or electric power); Crusher Feeder (mechanical); Deck Wands; Driller Tenders; Fireman and Heater Tender; Grade Checker; Mechanic or Welder, R.D.; Hydro-seeder; Mulcher; Nozzlemans; Oiler; Oilier and Cable Tender; Mucking Machine; Pumpman; Rollers, all types on subgrade (farm type, Case, John Deere and similar, or Compacting Vibrator), except when pulled by Dozer with operable blade; Steam Cleaners; Welding Machine

Group 2: A-Frame Truck (single drum); Assistant Refrigeration Plant (under 1,000 ton); Assistant Plant Operator, Fireman or Pugmizer (asphalt); Bagley or Stationary Scraper; Belt Finishing Machine; Blower Operator (cement); Cement Hog; Compressor (2,000 CFM or over, 2 or more, gas, diesel or electric power); Concrete Saw (multiple cut); Distributor Leverman; Ditch Witch or similar; Elevator; Hoisting materials; Dope Pots (power agitated); Fork Lift or Lumber Stacker; Hydra-lift and similar; Gin Trucks (pipeline); Hoist, single drum; Loaders (bucket, elevators and conveyors); Longitudinal Float; Mixer (portable - concrete); Pavement Breaker; Hydra-hammer and similar; Power Broom; Spray Curing Machine (concrete); Spreader Box (self-propelled); Straddle Buggy (Roms and similar on construction job only); Tractor (Farm type R/T with attachments, except Backhoe); Tugger Operator

Group 3: A-Frame Truck (2 or more drums); Assistant Refrigeration Plant and Chiller Operator (over 1000 ton); Backfillers (Cleveland and similar); Batch Plant and Wet Mix Operator, single unit (concrete); Belt-crete Conveyors with power pack or similar; Belt Loader (Kocal or similar); Bend Machine; Bob Cat; Boring Machine (earth); Boring Machine (rock under 8" bit) (Quarry Master, Joy or similar); Bump Cutter (Wayne, Saginaw or similar); Canal Lining Machine (concrete); Cleaning and Doping Machine (pipeline); Deck Engineer; Elevating Belt-type Loader (Euclid, Harber Green and similar); Elevating Grader-type Loader (Dumor, Adams or similar); Generator Plant Engineers (diesel, electric); Gunite Combination Mixer and Compressor; Mixerobile; Posthole Auger or Punch; Pump (Grout or Jet); Soil Stabilizer (P & H or similar); Spreader Machine; Tractor (to D-6 or equivalent) and Traxacavator; Traverse Finish Machine; Turnhead Operator

Group 4: Blade Operator (Motor Patrol and attachments); Concrete Pumps (Squeez-crete, Flow-crete, Pump-crete, Whitman and similar); Curb Extruder (asphalt or concrete); Drills (Churn, Core, Calys, or Diamond); Equipment Serviceman, Greaser and Oiler; Hoist (2 or more drums or Tower Hoist); Loaders (Overhead and Front-end, under 4 yds. R/T); Refrigeration Plant Engineers (under 1000 ton); Rubber-tire Skidders (R/T with or without attachments); Screed Operator; Surface Heater and Planer Machine; Trenching Machines (under 7 ft. depth capacity); Turnhead (with re-screening); Vacuum Drill (Reverse Circulation Drill under 8" bit)

## POWER EQUIPMENT OPERATORS (Cont'd)

AREA 4 (Cont'd)

Group 5: Drilling Equipment (8" bit and over) (Robbins, Reverse Circulation and similar); Hoe Ram; Paving (dual drum); Refrigeration Plant Engineer (1000 tons and over); Signalman (Whirlies, Highline, Hammerheads or similar)

Group 6: Automatic Subgrader (Ditches and Trimmers) (Autograde, ABC, R.A. Hansen and similar on grade wire); Backhoe (under 1 yd.); Batch Plant (over 4 units); Batch and Wet Mix Operator (multiple units, 2 and including 4); Boat Operator; Cableway Controller (Dispatcher); Cranes (25 tons and under); Derricks and Stifflegs (under 65 tons); Drill Doctor; Multiple Dozer Units with single blade; Paving Machine (asphalt and concrete); Piledriving Engineers; Quad-track or similar equipment; Roller (finishing pavement); Trenching Machines (7 ft. depth and over)

Group 7: Asphalt Plant Operator (Backhoes (1 yd. to 3 yds.); Blade (finish and Bluetop) Automatic, CMI, ABC and similar when used as automatic; Boom Cuts (side); Cableway Operators; Clamshell Operators (under 3 yds.); Concrete Slip Form Paver; Cranes (over 25 tons, including 45 tons); Crusher, Grizzly and Screening Plant Operator; Draglines (under 3 yds.); Elevating Belt (Holland type); R.D. Mechanic; R.D. Welder; Loader Operator (Front-end and Overhead, 4 yards, including 8 yards); Mucking Machine; Quad-track or similar equipment; Rubber-tired Scrapers; Shovels (under 3 yds.); Tractors (D-6 and equivalent and over)

Group 8: Backhoes (3 yds. and over); Cranes (over 45 tons, to 85 tons); Cranes (85 tons and over, all climbing, rails and tower); Clamshell Operator (3 yds. and over); Derricks and Stifflegs (65 tons and over); Draglines (3 yds. and over); Loader (360 degrees revolving Roehring Scooper or similar); Loaders (Overhead and Front-end, over 8 yds.); Helicopter Pilot; Shovels (3 yds. and over); Whirlies and Hammerheads, all

Group 9: Transi-lift

## TRUCK DRIVERS (AREA 1)

All Counties and portions of Counties East of the 120th Meridian (Except DOE Hanford Site in Benton and Franklin Counties)

Group 1: Escort Driver or Pilot Car, pickup hauling employees or material

Group 2: Flat Bed Truck, single rear axle; Fork Lift, 3,000 lbs. and under; Tender and Swamper; Leverperson loading Trucks at Bunkers; Pick-up hauling material; Seeder and Mulcher; Stationary Fuel Operator; Team Driver; Tractor (small rubber tired pulling trailer or similar equipment); Water Tank Truck, 1,800 gallons  
Group 3: Bus Driver or Employeehaul Driver; Flat Bed Truck, dual rear axle; Power Boat hauling employees or material); Tireperson No. 1

TRUCK DRIVERS (Cont'd)  
AREA 1 (Cont'd)

Group 4: Buggy Mobile and similar; Bulk Cement Tankers; Oil Tank Driver; Power operated Sweeper; Straddle Carrier (Ross Hyster and similar); Transit Mixers and Trucks hauling concrete (3 yards and under); Trucks, side, end, and bottom dump (under 6 yards); Water Tank Truck, 1,801 - 4,000 gallons

Group 5: Auto Crane, 2,000 lbs. capacity; Bulk Cement Spreaders; Dumptr (6 yds. and under); Flat Bed Truck (with hydraulic system); Fork Lift (3,001 - 16,000 lbs.); Rubber-tired Tunnel Jumbo; Scissor Truck; Slurry Truck Driver; Transit Mixers and Trucks, 4,001 to 6,000 gallons; Wrecker and Tow Trucks; Fuel Truck Driver; Steam Cleaner and Washer; Flaherty Spreader

Group 6: Service Greaser; Tireperson No. 2; Truck, side, end, and bottom dump (over 6 yds. to 12 yds.); Oil Distributor Driver (Road, Boot Person, Lever Person, Tender)

Group 7: A-Frame; Water Tank Truck, 6,001 to 8,000 gallons

Group 8: Dumptr (over 6 yds.); Transit Mixers and Trucks hauling concrete (6 yds. to 10 yds.); Trucks, side, end, and bottom dump (over 12 yds. including 20 yds.); Semi Truck and Trailer 50 tons and under; Lowboy

Group 9: Low Boy (over 50 tons); Water Tank Trucks, 8,001 to 10,000 gallons; Tractor with Steer Trailer; Truck mounted Crane with load bearing surface, either mounted or pulled

Group 10: Transit Mixer and Trucks hauling concrete (10 yds. to 15 yds.); Trucks, side, end, and bottom dump (over 20 yds. including 30 yds.); Water Tank Truck (10,001 to 12,000 gallons); Fork Lift, over 16,000 lbs.; Flaherty Spreader Box Driver; Flow Boys; Seal-and Dumps

Group 11: Mechanic, Field

Group 12: Tournarocker, D. W.'s and similar, with 2 to 4 wheel power tractor with trailer, gallonage or yardage scale, whichever is greater; Transit Mixers and Trucks hauling concrete (15 yds. to 20 yds.); Trucks, side, end, and bottom dump (over 30 yds. to 40 yds.); Water Tank Truck, 12,001 to 14,000 gallons

Group 13: Transit Mixers and Trucks hauling concrete (over 20 yds.); Trucks, side, end, and bottom dump (over 40 yds. to 50 yds.)

Group 14: Trucks, side, end, and bottom dumps (over 50 yds. to 100 yds.)

Group 15: Helicopter Pilot hauling employees or materials; Trucks, side, end, and bottom dump (over 100 yards)

TRUCK DRIVERS (Cont'd)  
AREA 2

All Counties and portions of Counties West of the 120th Meridian (Except those enumerated in Area 3) including the Northern portion of Pacific County and all of Kittitas and Yakima Counties

Group 1: Leverman and Loaders at Bunkers and Batch Plants; Swamper; and Checkers

Group 2: Team Drivers

Group 3: Bull Lifts and similar equipment used in loading and unloading trucks, transporting materials on job site (warehousing); Dumpsters and similar equipment (including Tournarockers, Tournarwagon, Turnatrailer, Cat DW series, Terra Cobra, LeTourneau, Westinghouse, Athey Wagon, Euclid, two and four-wheeled power tractor with trailer and similar top-loaded equipment transporting materials; Dump Trucks, side, end and bottom dump, including Semi-trucks and Trains or combinations thereof) - up to and including 5 yds.; Flatbed, single rear axle; Fuel Truck; Grease Truck; Greaser, Battery Service Man and/or Tire Service Man; Scissor Truck; Spreader, Flaherty; Tractor (small, rubber-tired); Vacuum Truck; Water Wagon and Tank Trucks, up to 1,600 gallons; Winch Truck, single rear axle; Wrecker, Tow Truck and similar equipment

Group 4: Flatbed, dual rear axle

Group 5: Buggymobile; Hyster Operators; Straddle Carrier (Ross, Hyster, and similar equipment); Water Wagon and Tank Trucks, 1,6000 gallons to 3,000 gallons

Group 6: Transit-mix, 8 to and including 4 1/2 yards

Group 7: Dumpsters and similar equipment (as listed in Group 3) - over 5 yds. to and including 12 yds.; Explosive Truck (field mix) similar equipment; Lowbed and Heavy Duty Trailer, under 50 tons gross; Road Oil Distributor Driver; Slurry Truck; Sno-go and similar equipment; Winch Truck, dual rear axle

Group 8: Dumpster and similar equipment (as listed in Group 3) - over 12 yards to and including 16 yards

Group 9: Bulk Cement Tankers; Dumpsters and similar equipment (as listed in Group 3) - over 16 yds. to and including 20 yds.; Water Wagon and Tank Truck, over 3,000 gallons

Group 10: Bull Lifts or similar equipment used in loading or unloading trucks transporting materials on job site, other than warehousing

Group 11: Transit-mix, over 4 yds. to and including 6 yds.

Group 12: "A" Frame or Hydralift Trucks or similar equipment

TRUCK DRIVERS (Cont'd)  
AREA 2 (Cont'd)

- Group 13: Dumpster and similar equipment (as listed in Group 3) - over 20 yds. to and including 30 yds.; Lowbed and Heavy Duty Trailer, over 50 tons gross to and including 100 tons gross
- Group 14: Transit-mix, over 6 yds. to and including 8 yds.
- Group 15: Dumpsters and similar equipment (as listed in Group 3) - over 30 yds. to and including 40 yds.; Lowbed and Heavy Duty Trailer, over 100 tons gross
- Group 16: Transit-mix, over 8 yds. to and including 10 yds.
- Group 17: Dumpsters and similar equipment (as listed in Group 3) - over 40 yds. to and including 55 yds.
- Group 18: Transit-mix, over 10 yds. to and including 12 yds.
- Group 19: Transit-mix, over 12 yds. to and including 16 yds.
- Group 20: Transit-mix, over 15 yds. to and including 20 yds.
- Group 21: Transit-mix, over 20 yds.
- Group 22: Escort or Pilot Car
- Group 23: Flat bed (single rear axle); pickup, truck

AREA 3

Clark, Cowlitz, Klickitat, Skamania, and Wahkiakum Counties;  
and the Southern portion of Pacific County

- Group 1: Battery Rebuilders; Run or Manhaul Driver; Concrete Buggies (power operated); Dump trucks, side, end and bottom dumps, including Semi Trucks and Trains or combinations thereof: 6 cu. yds. and under, Lift Jitneys, Fork lifts (all sizes in loading, unloading and transporting material on job site); Loader and/or Leverman on Concrete Dry Batch Plant (manually operated); Pilot Car; Solo Flat Bed and misc. Body Trucks, 0-10 tons; Truck Tender; Truck Mechanic Tender; Warehouseman (warehouse parts, tool men and parts chaser, checkers and receivers); Water Wagons (rated capacity) - up to 1,600 gallons
- Group 2: "A" Frame or Hydra-lift Truck with load bearing surface; Lubrication Man, Fuel Truck Driver, Tiresman, Wash Rack, Steam Cleaner or combinations; Team Drivers

TRUCK DRIVERS (Cont'd)  
AREA 3 (Cont'd)

- Group 3: Dump Trucks, side, end and bottom dumps, including Semi Trucks and Trains or combinations thereof: over 6 cu. yds. and including 10 cu. yds.; Slurry Truck Driver or Leverman; Transit Mix, and Wet or Dry Mix Trucks; 5 cu. yds. and under; Tiresman (full-time basis); Water Wagons (rated capacity) - 1,600 to 3,000 gallons
- Group 4: Flaherty Spreader Driver or Leverman; Lowbed Equipment, Flat Bed Semi-trailer, Truck and Trailers or doubles transporting equipment or wet or dry materials; Lumber Carrier Driver - Staddle Carrier (used in loading, unloading and transporting of materials on job site); Oil Distributor Driver or Leverman; Water Wagons (rated capacity) - 3,000 to 5,000 gallons
- Group 5: Dumpsters or similar equipment, all sizes; Transit Mix and Wet or Dry Trucks, over 5 cu. yds. and including 7 cu. yds.
- Group 6: Dump Trucks, side, end and bottom dumps, including Semi Trucks and Trains or combinations thereof: over 10 cu. yds. and including 20 cu. yds.; Transit Mix and Wet or Dry Mix Trucks, over 7 cu. yds. and including 9 cu. yds.; Truck Mechanic - Welder - Body Repairman; Water Wagons (rated capacity) - 5,000 to 7,000 gallons
- Group 7: Dump Trucks, side, end and bottom dumps, including Semi Trucks and Trains or combinations thereof: over 20 cu. yds. and including 30 cu. yds.; Transit Mix and Wet or Dry Mix Trucks, over 9 cu. yds. and including 11 cu. yds.; Water Wagons (rated capacity) over 7,000 gallons to 10,000 gallons
- Group 8: Dump Trucks, side, end and bottom dumps, including Semi Trucks and Trains or combinations thereof: over 30 cu. yds. and including 40 cu. yds.; Transit Mix and Wet or Dry Mix Trucks, over 11 cu. yds. and including 13 cu. yds.; Water Wagon (rated capacity) over 10,000 gallons to 15,000 gallons
- Group 9: Dump Trucks, side, end and bottom dumps, including Semi Trucks and Trains or combinations thereof: over 40 cu. yds. and including 50 cu. yds.; Transit Mix and Wet or Dry Mix Trucks, over 13 cu. yds. and including 15 cu. yds.
- Group 10: Dump Trucks, side, end and bottom dumps, including Semi Trucks and Trains or combinations thereof: over 50 cu. yds. and including 60 cu. yds.
- Group 11: Dump Trucks, side, end and bottom dumps, including Semi Trucks and Trains or combinations thereof: over 60 cu. yds. and including 70 cu. yds.
- Group 12: Dump Trucks, side, end and bottom dumps, including Semi Trucks and Trains or combinations thereof: over 70 cu. yds. and including 80 cu. yds.

TRUCK DRIVERS (Cont'd)  
AREA 3 (Cont'd)

Group 13: Dump Trucks, side, end and bottom dumps, including Semi Trucks and Trailers or combinations thereof; over 80 cu yds. and including 90 cu. yds.

Group 14: Dump Trucks, side, end and bottom dumps, including Semi Trucks and Trailers or combinations thereof; over 90 cu. yds. and including 100 cu. yds.

AREA 4

DOE Sanford Site in Benton and Franklin Counties

Group 1: Flat Bed Truck, single rear axle; Fork Lift, 3,000 lbs. and under; Tender and Swamper; Leverperson loading Trucks at Bunkers; Pick-up hauling material; Seeder and Mulcher; Stationary Fuel Operator; Team Driver; Tractor (small rubber tired Pulling trailer or similar equipment); Water Tank Truck, 1,800 gallons

Group 2: Bus Driver or Employeehaul Driver; Flat Bed Truck, dual rear axle; Power Boat hauling employees or material; Tireperson No. 1

Group 3: Buggy Mobile and similar; Bulk Cement Tanker; Oil Tank Driver; Power Operated Sweeper; Straddle Carrier (Rosa Hyster and similar); Transit Mixers and Trucks hauling concrete (1 yds. and under); Trucks, side, end, and bottom dump (under 6 yds.); Water Tank Truck, 1,801 - 4,000 gallons

Group 4: Auto Crane, 2,000 lbs. capacity; Bulk Cement Spreader; Dumptor (6 yds. and under); Flat Bed Truck (with hydraulic system); Fork Lift (3,001 - 16,000 lbs.); Rubber-Lined Tunnel Jumbo; Scissor Truck; Slurry Truck Driver; Transit Mixers and Trucks, 4,001 to 4,000 gallons; Wrecker and Tow Trucks; Fuel Truck Driver; Steam Cleaner and Washer; Flaherty Spreader

Group 5: Service Greaser; Tireperson No. 2; Truck, side, end, and bottom Dump (over 6 yds. to 12 yds.); Oil Distributor Driver (Road, Boot Person, Lever Person, Tender)

Group 6: A-Frame; Water Tank Truck, 6,001 to 8,000 gallons

Group 7: Dumptor (over 6 yards); Transit Mixers and Trucks hauling concrete (6 yards to 10 yards); Trucks, side, end, and bottom dump (over 12 yards including 20 yards); Seal Truck and Trailer; Lowboy 50 tons and under

Group 8: Low Boy (over 50 ton); Water Tank Trucks, 8,001 to 10,000 gallons; Tractor with Steer Trailer; Truck mounted Crane with load bearing surface, either mounted or pulled

Group 9: Transit Mixer and Trucks hauling concrete (10 yds. to 15 yds.); Trucks, side, end, and bottom dump (over 20 yds. including 30 yds.); Water Tank Truck (10,001 to 12,000 gallons); Fork Lift, over 16,000 lbs.; Flaherty Spreader Box Driver; Flow Boys; Semi-end Dumps

TRUCK DRIVERS (Cont'd)  
AREA 4 (Cont'd)

Group 10: Mechanic, Field

Group 11: Tournarocker, D.W.'s and similar, with 2 or 4 wheel power tractor with trailer, gallonage or yardage scale, whichever is greater; Transit Mixers and Trucks hauling concrete (15 yds. to 20 yds.); Trucks, side, end, and bottom dump (over 10 yds. to 40 yds.); Water Tank Truck, 12,001 to 14,000 gallons

Group 12: Transit Mixers and Trucks hauling concrete (over 20 yds.); Trucks, side, end, and bottom dump (over 40 yds. to 50 yds.)

Group 13: Trucks, side, end, and bottom dumps (over 50 yds. to 100 yds.)

Group 14: Helicopter Pilot hauling employees or material; Trucks, side, end, and bottom dump (over 100 yards)

Drivers and Tenders (hauling sacked cement - add \$.15 per hour)

Winch Truck - takes classification of Truck on which Winch is mounted.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR, 5.5 (a) (1) (11)).

## TECHNICAL SPECIFICATIONS

### 1.0 MOBILIZATION

#### 1.1 Description

This item shall consist of the preconstruction expenses and the costs of preparatory work and operations performed by the Contractor that are not a part of a payment item or are not identified in the specifications as being incidental to a payment item or items and which occur before 10% of the total original contract amount is earned from other bid items. Items which are not to be included in the item of Mobilization include but are not limited to

1. Any portion of the work covered by a specific bid item or incidental work which is to be included in a bid item or items
2. Profit, interest on borrowed money, overhead, or management costs

#### 1.2 Payment

Payment will be made under Item 1, Mobilization, per lump sum.

Payment for mobilization shall be made at the contract unit price per lump sum when 10% of the total original contract amount is earned from other bid items. Payment will be made for 100% of the amount bid for mobilization or 10% of the total original contract amount, whichever is the least. Should the first progress payment to Contractor be less than 10% of the original contract amount, then payment on this item will be prorated accordingly. Upon completion of all work on the project, payment of any amount bid for mobilization in excess of 10% of the total original contract amount will be paid.

## 2.0 PORTLAND CEMENT CONCRETE PAVEMENT AND ASSOCIATED WORK

### 2.1 General

#### 2.1.1 Description of Work

The work consists of replacement of existing damaged concrete slabs with new portland cement concrete and spall repair in accordance with this specification and shall conform to the lines, grades, thicknesses, and typical cross sections indicated on the drawings.

#### 2.1.2 Quality Assurance

1. King County will provide inspection service to the satisfaction of the Engineer. Tests conducted for the sole benefit of the Contractor, or before a product is approved, shall be at the Contractor's expense.
2. Qualification of Workmen: Provide at least one person who shall be present at all times during execution of this portion of the work and who is thoroughly trained and experienced in placing the types of concrete specified and who shall direct all work performed under this section.

#### 2.1.3 Submittals

Within 14 days after execution of the contract, submit to the Engineer the proposed design mix for the concrete required for this portion of the work. Also submit the manufacturer's name and catalog number of items, such as membranes, all admixtures, and the name and address of the proposed concrete supplier.

Approval of the design mix will be based on actual test data called out in Article 2.3.4 of this section.

The Contractor shall also furnish King County with samples of fine and coarse aggregate for testing.

#### 2.1.4 Product Handling

Ready-mixed concrete shall be placed in its final position within 1 hour after adding cement.

1. Retempering: Concrete shall be mixed only in such quantities as are required for immediate use, and will be used while fresh before initial set has taken place. Any concrete which has developed initial set shall not be used. Concrete which has partially hardened shall not be retempered or remixed.
2. Protection: Use all means necessary to protect concrete materials before, during, and after installation and to protect the installed work and materials of all other trades.

3. Replacement: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Engineer and at no additional cost to the Owner.

## 2.2 Products

### 2.2.1 Concrete

#### 1. General

- a. All concrete, unless otherwise specifically permitted by the Engineer, shall be batched and mixed at an approved plant.
  - b. The control of concrete production shall be under supervision of a recognized testing laboratory, selected and paid for by the Contractor, who shall design the mixes and furnish inspection of batched aggregates at the mixing plant.
2. Quality: The paving concrete shall have a minimum flexural strength of 650 psi, and a minimum allowable cement content of six sacks of cement per cubic yard.

The minimum flexural strength specified is the strength at seven days based on actual test data called out in Article 2.3.4 of this section.

In addition to that specified above, the concrete shall attain such interim strength as necessary to meet the scheduled phase completion dates and support the construction equipment selected by the Contractor and approved by the Engineer.

### 2.2.2 Aggregate

1. General: Aggregates delivered to the mixer shall consist of crushed stone, crushed or uncrushed gravel, crushed slag, or natural sand. The aggregate shall be composed of sound, tough, durable particles and shall not exceed the limits for deleterious substances given in ASTM C 33. The aggregate in a size group shall not contain more than 8% by weight of flat or elongated pieces. A flat or elongated particle is one having a ratio between the maximum and the minimum dimensions of a circumscribing rectangular prism exceeding 5 to 1.

The percentage of wear shall not exceed 40% when tested in accordance with ASTM C 131.

2. Fine Aggregate: Fine aggregate for concrete shall conform to the requirements of ASTM C 33 and shall meet the requirements of Table 2.2.2-1.

TABLE 2.2.2-1. GRADATION FOR FINE AGGREGATE

Sieve Designations (square openings)	Percentage by Weight Passing Sieves
3/8 in. (9.5 mm)	100
No. 4 (4.75 mm)	95 to 100
No. 8 (2.36 mm)	80 to 100
No. 16 (1.18 mm)	50 to 85
No. 30 (600 micro-m)	25 to 60
No. 50 (300 micro-m)	10 to 30
No. 100 (150 micro-m)	2 to 10

3. Coarse Aggregate: Coarse aggregate shall conform to the requirements of ASTM C 33. Gradation shall be in accordance with Table 2.2.2-2.

TABLE 2.2.2-2. GRADATION FOR COARSE AGGREGATE

Sieve Designations (square openings)	From 1-1/2 in. to No. 4 (38.1 mm to 4.75 mm)	
	Percentage of Weight Passing Sieves 1-1/2 to 3/4 in.      3/4 in. to No. 4	
2-1/2 in. (63.0 mm)	-	-
2 in. (50.8 mm)	100	-
1-1/2 in. (38.1 mm)	90 to 100	-
1 in. (25.0 mm)	25 to 55	100
3/4 in. (19.0 mm)	0 to 15	95 to 100
1/2 in. (12.5 mm)	-	-
3/8 in. (9.5 mm)	0 to 5	20 to 55
No. 4 (4.75 mm)	-	0 to 10
No. 8 (2.36 mm)	-	0 to 5



### 2.2.3 Cement

All cement shall be portland cement conforming to ASTM Designation C 150, Type III, and shall be the product of one manufacturer.

### 2.2.4 Fly Ash

All fly ash shall conform to ASTM Designation C 618, Class F.

### 2.2.5 Admixtures

1. General: All admixtures shall be supplied by one manufacturer approved by the Engineer. Admixture dosages shall be in accordance with the manufacturer's recommendations.
2. Air-Entraining Agents: Shall meet the requirements of ASTM C 260 and shall be added to the mixer in the amount necessary to produce 4% entrained air,  $\pm 1-1/2\%$ .
3. Water-Reducing Agents: Shall conform to ASTM C 494, Type A for water-reducing; Type D for water-reducing and retarding; Type F for water-reducing, high range; and Type G for water-reducing, high range and retarding.
4. Retarders: Shall be approved by the Engineer prior to their use.

### 2.2.6 Water

Water used in mixing or curing shall be as clean and free of oil, salt, acid, alkali, sugar, vegetable, or other substances injurious to the finished product as possible. Water will be tested in accordance with the requirements of AASHTO T-26. Water known to be of potable quality may be used without testing.

### 2.2.7 Cover Materials for Curing

Liquid membrane-forming compounds for curing concrete shall conform to the requirements of ASTM C 309, Type 2.

### 2.2.8 Bonding Agent for Spalls

Use Coneresive 1001-LPC as manufactured by Adhesive Engineering Company or an approved equal.

## 2.3 Execution

### 2.3.1 Preparatory Work

1. Inspection
  - a. Prior to all work of this section, carefully inspect the installed work of all other trades and verify that all

such work is complete to the point where this installation may properly commence.

- b. Verify that all items to be embedded in concrete are in place and properly oriented, located, and secured.
- c. Verify that concrete may be placed to the lines and elevations indicated on the drawings.

## 2. General

- a. Thoroughly clean all areas in which concrete is to be placed. Clean and roughen existing concrete to provide a bondable surface. Concrete forms which have not been treated with oils, waxes, or other bond breakers shall be thoroughly wet prior to placing concrete.
- b. Clean transporting and handling equipment of all hardened concrete.

## 3. Slab Removal

- a. Break up concrete slabs neatly using the existing joints as the edges of removal. Remove pavement, taking care to not disturb adjacent concrete pavement that will remain. Adjacent materials designated to remain that are damaged by the Contractor due to his operations shall be replaced by him at his own expense, to the satisfaction of the Engineer. Saw cut any dowels around perimeter of new concrete pavement areas.
- b. All material included in this bid item shall be hauled off the airport and disposed of by the Contractor.

## 4. Spall Removal

- a. Remove all concrete with a concrete saw and air hammer to the dimensions shown on the drawings.
- b. Thoroughly clean the exposed sound concrete by blowing out the area with compressed air or by sandblasting, brooming, and blowing with compressed air.
- c. Prime the sides and bottom with Coneresive 1001-LPC as recommended by the manufacturer. Do not prime joint edges.

### 2.3.2 Equipment

- 1. General: Equipment and tools necessary for handling materials and performing all parts of the work shall be approved by the Engineer as to design, capacity, and mechanical condition.

The equipment shall be at the job site before the start of construction operations for examination and approval.

2. Ready-Mix Plant: Ready-mix concrete plants shall be approved and certified by the NRMCA. Ready-mix concrete shall be batched with equipment and in accordance with the applicable portions of ASTM C 94.

Truck agitators used for hauling ready-mix concrete shall conform to the requirements of ASTM C 94.

3. Concrete Saw: Provide sawing equipment adequate in number of units and power to complete the sawing to the required dimensions and at the required rate. Provide at least one standby saw in good working order. Maintain an ample supply of saw blades at the site of the work at all times during sawing operations. Provide adequate artificial lighting facilities for night sawing.
4. Vibrators: Provide mechanical vibrators with a minimum frequency of 7000 vibrations per minute. Provide at least one standby vibrator in good working order.

#### 2.3.3 Conditioning of Underlying Course

The prepared grade shall be well moistened with water, without saturating, immediately prior to concrete placement, to prevent rapid loss of moisture from concrete. In cold weather, the underlying subbase shall be protected so that it will be entirely free of frost when concrete is placed.

#### 2.3.4 Proportions

1. Prior to the start of concrete operations and after approval of all material to be used in the concrete, submit test data showing the proportions and actual flexural strength obtained from the concrete. Flexural strength shall be as specified at 28 days using test specimens prepared in accordance with ASTM C 31 and tested in accordance with ASTM C 78. The mix determined shall be workable concrete having a slump between 2 and 4 in. (50 and 100 mm), as determined by ASTM C 143.
2. The minimum cement content shall be maintained to produce concrete of suitable durability and workability. The maximum water/cement ratio specified for concrete shall not be exceeded. Entrained air shall be required to increase durability and provide workability. Caution should be exercised in establishing the air-entrainment percentage, as excessive air entrainment will aggravate edge slumping and insufficient air entrainment will result in poor concrete durability. Batches with slump in excess of 4 in. shall be wasted.

3. The cement content shall not be less than six sacks per cubic yard nor shall the water/cement ratio, including free surface moisture on the aggregates but not including moisture absorbed by the aggregates, be more than 0.45 by weight. The cement content shall be determined in accordance with ASTM C 138.
4. Air-entraining admixture shall be added in such a manner that will ensure uniform distribution of the agent throughout the batch. The air content of freshly mixed air-entrained concrete shall be based upon trial mixes with the materials to be used in the work adjusted to produce concrete of the required plasticity and workability. The percentage of air entrainment in the mix shall be 4%  $\pm$  1.5 percentage points. Air content shall be determined by testing in accordance with ASTM C 231 for gravel and stone coarse aggregate.
5. The Contractor may substitute up to 15%, by weight, of fly ash for an equal amount of cement in his design mix. All other requirements of this section shall be fulfilled.

#### 2.3.5 Field Test Specimens

1. Concrete samples shall be furnished by the Contractor and shall be taken in the field to determine the consistency, air content, and strength of the concrete. Flexural test beams will be made by King County or its representative each day that concrete is placed or for each 50 cu yd placed in a single day. Each group of test beams will be molded from the same batch of concrete and will consist of a sufficient number of specimens to provide four flexural strength tests at each test age. The specimens shall be made in accordance with ASTM C 31 and ASTM C 172. However, at the start of concrete operations and when the aggregate source, aggregate characteristics, or mix design is changed, additional groups of test beams may be required until the Engineer is satisfied that the concrete mixture being used complies with the strength requirements of these specifications. Test ages will be three days and seven days.
2. The flexural strength of the concrete shall meet the following requirements: (a) The average of any four consecutive strength tests, tested at the end of seven days, shall have an average flexural strength equal to or greater than the specified flexural strength. (b) Not more than 20% of the beams tested at the end of seven days shall have a flexural strength less than the specified strength. Specimens which are obviously defective shall not be considered in the determination of the strength. When it appears that the test specimens will fail to conform to the requirements for strength, the Engineer shall have the right to order changes in the concrete sufficient to increase the strength to meet these requirements. When a satisfactory relationship between three-day and seven-day strengths has been established and approved, the three-day

test results may be used as an indicator of the seven-day strengths. However, the three-day test results will not replace the results of the seven-day tests if the seven-day results fall below the requirement.

#### 2.3.6 Mixing Concrete

Ready-Mix: Ready-mixed concrete shall be mixed and delivered in accordance with the requirements of ASTM C 94, except that the minimum required revolutions of the mixing speed for transit-mixed concrete may be reduced to not less than that recommended by the mixer manufacturer. The number of revolutions recommended by the mixer manufacturer shall be indicated on the manufacturer's serial plate attached to the mixer. Furnish test data acceptable to the Engineer verifying that the make and model of the mixer will produce uniform concrete conforming to the provisions of ASTM C 94 at the reduced number of revolutions shown on the serial plate.

#### 2.3.7 Limitations of Mixing

1. No concrete shall be mixed, placed, or finished when the natural light is insufficient, in the opinion of the Engineer, unless an adequate and approved artificial lighting system is operated.
2. During periods of warm weather when the maximum daily air temperature exceeds 85°F (30°C), the following precautions should be taken: The forms and the underlying material shall be sprinkled with water immediately before placing the concrete. The concrete shall be placed at the coolest temperature practicable, and in no case shall the temperature of the concrete exceed 90°F (32°C) when placed. The aggregates and mixing water shall be cooled as necessary to maintain the concrete temperature below the specified maximum.
3. During cool weather placement of concrete, the Contractor shall take such measures as necessary to ensure that the required flexural strengths are met as required by the project schedule.
4. Mixing and placing concrete shall be discontinued when a descending air temperature in the shade away from artificial heat reaches 40°F and not be resumed until an ascending air temperature in the shade and away from artificial heat reaches 35°F unless authorized in writing by the Engineer.

#### 2.3.8 Placing Concrete

1. Deposit the concrete on the moistened grade to require as little rehandling as possible. Unless truck agitators are equipped with means for discharge of concrete without segregation of the materials, the concrete shall be unloaded into an approved spreading device and mechanically spread on the grade

to prevent segregation of the materials. Necessary hand spreading shall be done with shovels -- not rakes. Do not allow workmen with boots or shoes coated with earth or foreign substances to walk in the freshly mixed concrete.

2. Consolidate concrete against and along the faces of all joints by means of vibrators inserted in the concrete. Do not permit vibrators to come in contact with a joint or the grade. In no case operate the vibrator longer than 15 seconds in any one location, nor shall the vibrators be used to move the concrete.

#### 2.3.9 Strike-off of Concrete

Following the placing of the concrete, strike off to conform to the cross section shown on the drawings and to an elevation such that when the concrete is properly consolidated and finished, the surface of the pavement shall be at the elevation noted on the drawings.

#### 2.3.10 Joints

Joints, weakened-plane joints, or both, shall be installed at the locations and spacing as indicated on the drawings. Existing joints shall be made continuous through new slabs or spall replacements which occur on both sides of an existing joint. These joints will be installed by sawing a groove into the concrete surface after the concrete has hardened in the same manner as specified in paragraph 2.3.13.

#### 2.3.11 Final Strike-off, Consolidation, and Finishing

Slab Finish: After the concrete has been placed, struck off, consolidated, and leveled, the concrete shall not be worked further until ready for floating. Floating shall begin when the water sheen has disappeared and/or when the mix has stiffened sufficiently to permit the proper operation of a power-driven float to consolidate the surface. Hand floating with wood or cork-faced floats shall be used in locations too small for or inaccessible to the power-driven machine. The surface tolerance shall not exceed 1/2 in. in 10 ft. The surface shall be roughened with stiff brushes approximately 1/16 in. (2 mm) deep transverse to the runway centerline immediately after floating is completed.

#### 2.3.12 Curing

1. General: Immediately after the finishing operations have been completed and marring of the concrete will not occur, the entire surface of the newly placed concrete shall be cured in accordance with the method below. Failure to provide sufficient curing material of whatever kind the Contractor may elect to use, or lack of water to adequately take care of both curing and other requirements, shall be cause for immediate suspension of concreting operations. The concrete shall not

be left exposed for more than 1/2 hour during the curing period.

2. Impervious Membrane Method: Uniformly spray the entire surface of the pavement with white pigmented curing compound immediately after the finishing of the surface and before the set of the concrete has taken place. Do not apply the curing compound during rainfall. Curing compound shall be applied by mechanical sprayers under pressure at the rate of 1 gallon (4 liters) to not more than 150 ft<sup>2</sup> (14 m<sup>2</sup>). The spraying equipment shall be of the fully atomizing type equipped with a tank agitator. At the time of use, the compound shall be in a thoroughly mixed condition with the pigment uniformly dispersed throughout the vehicle. During application, the compound shall be stirred continuously by effective mechanical means. Hand-spraying of odd widths or shapes and concrete surfaces exposed by the removal of forms will be permitted. Curing compound shall not be applied to the inside faces of joints to be sealed, but other approved means shall be used to ensure proper curing for 72 hours. The curing compound shall be of such character that the film will harden within 30 minutes after application. If the film becomes damaged from any cause within the required curing period, immediately repair the damaged portions with additional compound.

#### 2.3.13 Saw Cutting and Repairs to Joints and Cracks

Saw cut all slabs to match existing longitudinal and transverse joints. Make all saw cuts as early as possible to prevent random cracking, but late enough to prevent spalling. Sawing shall be 1/8 in. wide, shall be cut as early as possible, and shall be carried one quarter of the concrete slab thickness and one half the depth of spall repairs. The Contractor shall have sufficient equipment on the project to complete the sawing to meet the schedule.

#### 2.3.14 Protection of Pavement

The Contractor shall protect the pavement and its appurtenances against all traffic. This shall include watchmen to direct traffic and the erection and maintenance of warning signs, lights, pavement bridges, crossovers, etc. All damage to the pavement occurring prior to final acceptance shall be repaired or the pavement replaced at the Contractor's expense. In order that the concrete be properly protected against the effects of rain before the concrete is sufficiently hardened, the Contractor shall have materials available at all times for the protection of the surfaces of the unhardened concrete. Such protective materials shall consist of rolled polyethylene sheeting at least 4 mils thick of sufficient length and width to cover the concrete slab. The sheeting shall be unrolled without dragging it over the concrete surface. The edges and surface of the sheeting shall be weighted to prevent movement from winds or aircraft jet blast.

#### 2.3.15 Opening to Traffic

Concrete will not be opened to overlay paving operations until test specimens molded and cured in accordance with ASTM C 31 have attained a flexural strength of 450 psi (3102 kPa) when tested in accordance with ASTM C 78. Clean the pavement to the satisfaction of the Engineer prior to overlay paving. The runway will not be opened to air traffic until the concrete has attained a flexural strength of 550 psi (3792 kPa). Additional specimens to verify strengths for overlay operations or opening of the runway may be made by the Contractor and at his expense.

#### 2.4 Measurement and Payment

##### 2.4.1 Measurement

1. Item 2, Major Spall Repair, 4-In. Width  
Item 3, Major Spall Repair, 8-In. Width

The quantity to be paid for will be the number of linear feet, measured along the centerline of the joints or cracks, for repairs of the specified type, in place, completed, and accepted.

2. Item 8, Portland Cement Concrete Slab Replacement

The quantity to be paid for will be the number of square yards of pavement matching the thickness of adjacent panels, in place, completed, and accepted.

##### 2.4.2 Payment

1. Item 2, Major Spall Repair, 4-In. Width  
Item 3, Major Spall Repair, 8-In. Width

Payment shall be made at the contract unit price per linear foot for Major Spall Repair, 4-In. Width, and Major Spall Repair, 8-In. Width.

The contract unit price per linear foot for the spall repairs at the type specified above shall be full compensation for providing all labor, materials, and equipment for the joints as specified, including removing existing joint sealer, saw cutting, forming, cleaning, and joint sealer material, completed and in place.

2. Item 8, Portland Cement Concrete Slab Replacement

Payment shall be made at the contract unit price per square yard for Portland Cement Concrete Slab Replacement.



The contract unit price per square yard shall be full compensation for providing all materials, labor, and equipment for removal of existing damaged concrete panels identified for removal and placement of the new concrete pavement, including saw cutting to provide longitudinal or transverse joints to match joints in adjacent panels.

2.5 Testing and Material Requirements

2.5.1 Tests

ASTM C 31	Making and Curing Concrete Test Specimens in the Field
ASTM C 78	Test Method for Flexural Strength of Concrete (using simple beam with third-point loading)
ASTM C 131	Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C 138	Test Method for Unit Weight, Yield, and Air Content (gravimetric) of Concrete
ASTM C 143	Test Method for Slump of Portland Cement Concrete
ASTM C 172	Sampling Freshly Mixed Concrete
ASTM C 231	Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
AASHTO T-26	Quality of Water to be Used in Concrete

2.5.2 Materials

ASTM C 33	Specification for Concrete Aggregates
ASTM C 94	Specification for Ready-Mixed Concrete
ASTM C 150	Specification for Portland Cement
ASTM C 260	Specification for Air-Entraining Admixtures for Concrete
ASTM C 309	Specification for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C 494	Specification for Chemical Admixtures for Concrete
ASTM C 618	Specifications for Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete

### 3.0 MINOR SPALL REPAIR

#### 3.1 Description

This item shall consist of providing and installing a resilient and adhesive joint sealing filler capable of effectively sealing joints and cracks in portland cement concrete pavements.

#### 3.2 Materials

##### 3.2.1 Joint Sealers

Joint sealing materials shall meet the requirements of ASTM D 3405, Joint Sealants, Hot-Poured, for Concrete and Asphalt Pavements.

#### 3.3 Construction Methods

##### 3.3.2 Preparation of Joints

Immediately before sealing, the joints shall be thoroughly cleaned of all laitance, curing compound, and other foreign material. Cleaning shall be accomplished by sandblasting or by wire brushing. Upon completion of cleaning, the joints shall be blown out with compressed air. The joint faces shall be surface dry when the seal is applied.

Prior to resealing joints, the existing joint material shall be removed to the depth and length as shown on the plans.

##### 3.3.3 Installation of Sealants

Joints shall be inspected for proper width, depth, alignment, and preparation, and shall be approved by the Engineer before sealing is allowed. Sealants shall be installed in accordance with the following requirements:

Hot-Poured Sealants. The joint sealant shall be applied uniformly solid from bottom to top and shall be filled without formation of entrapped air or voids. A backing material shall be placed as shown on the plans and shall be nonadhesive to the concrete or the sealant material. The heating kettle shall be an indirect heating type, constructed as a double boiler. A positive temperature control and mechanical agitation shall be provided. The sealant shall not be heated to more than 20°F (-11°C) below the safe heating temperature. The safe heating temperature can be obtained from the manufacturer's shipping container. A direct connecting pressure type extruding device with nozzles shaped for insertion into the joint shall be provided. Any sealant spilled on the surface of the pavement shall be removed immediately.

3.4 Method of Measurement

Joint sealing and minor spall repair shall be measured by the linear foot of joint, complete and accepted.

3.5 Basis of Payment

Payment will be made under Item 4, Minor Spall Repair, per linear foot.

Payment for minor spall repair shall be made at the contract unit price per linear foot. The price shall be full compensation for furnishing all materials; for all preparation, delivering, and placing of these materials; and for all labor, equipment, tools, and incidentals necessary to complete the item.

3.6 Testing Requirements

ASTM D 412	Tests for Rubber Properties in Tension
ASTM D 1644	Tests for Nonvolatile Content of Varnishes

3.7 Material Requirements

ASTM D 3405	Joint Sealants, Hot-Poured, for Concrete and Asphalt Pavements
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#### 4.0 FABRIC JOINT TREATMENT

##### 4.1 Description

This item shall consist of treating the joints and cracks in the portland cement concrete and asphaltic concrete pavements by placing a precoated fabric or a glass fiber woven fabric over the joints at the locations shown on the plans and as directed by the Engineer.

##### 4.2 Material

###### 4.2.1 Precoated Fabric

Membrane shall incorporate a high-strength, heat-resistant mesh embedded in a layer of self-adhesive rubberized asphalt with the following properties:

<u>Property</u>	<u>Value</u>	<u>Test Method</u>
Thickness	0.065 in. min	
Permeance, perms (grains/sq ft/hr, in hg)	0.10 max	ASTM E 96 Method B
Tensile Strength	50 lb/in. min	ASTM D 882 (modified for 1-in. opening)
Puncture resistance (mesh)	200 lb min	ASTM E 154
Pliability, 1/4-in. mandrel 180-degree bend at 15°F	No cracks in mesh or rubberized asphalt	ASTM D 146

###### 4.2.2 Glass Fiber Woven Fabric

1. Bituminous Material: Bituminous material shall consist of an asphaltic polymer conforming to the following physical properties:

Penetration at 77°F 100G 5 sec, Tex-505-C	35-82
Softening point, ASTM D 2398	155 degrees (min)
380°F viscosity, ASTM D 3236	1000 to 1800 cps
Low temperature flexibility (tested in accordance with procedure shown below)	0°F (max)

Low Temperature Flexibility Test: Cast a sample 1.5 in. by 9 in. by 0.125 in.  $\pm 0.01$  in. on 0.003-in. aluminum foil. Allow to cool in air at 75°F  $\pm 5^\circ$ F for 1 hour. Then condition the sample and a 1-in. mandrel at the desired test temperature for 1 hour. Bend the sample through an arc of 180 degrees

over the 1-in. mandrel in approximately 2 seconds time, with the foil next to the mandrel when the bend is made. Immediately after bending, examine the sample for cracking, flaking, or loss of adhesion, the presence of which constitutes failure.

2. Reinforcement Materials: Reinforcement material shall consist of a glass fiber woven fabric conforming to the construction requirements for Type 3 fabric, as shown in Table 1, ASTM D 2150. The fabric shall comply with the following additional requirements:

	<u>Minimum</u>	<u>Maximum</u>
Weight, oz per sq yd	21.6	26.3
Tensile strength of individual rovings		
Average of five rovings, at least two from each principal direction, lb	175	
Minimum tensile strength of any individual roving, lb	125	

Procedure for Testing Individual Rovings: Individual rovings shall be carefully removed from a section of fabric at least 1 ft square, placed on release paper or polyethylene sheet, and held in place by tape near the ends of the rovings. A suitable epoxy shall be applied at two locations on each roving to form disks approximately 1/8 in. thick and 1 in. in diameter, taking care to ensure that the epoxy completely encompasses the roving. The length of roving between the disks shall be 3 in.  $\pm$  1/4 in. The purpose of the epoxy is to encapsulate the roving and provide a surface for insertion in tensile machine jaws without damaging the glass roving. The epoxy shall be allowed to cure at least 24 hours at 70°F to 80°F. Excess roving between the tape and the disks shall be cut off and the specimens removed from the release paper or plastic. Examine the specimens to ensure that the roving is completely encapsulated.

The prepared specimens shall then be tested for tensile strength using equipment described in ASTM D 1682. A constant rate of extension of 1/2 to 1 in. per minute shall be used.

3. Packaging Requirements
- The fabric shall be packaged in standard width rolls, two rolls of 24-in. fabric per box.
  - The bituminous material shall be packaged in 11- x 11- x 14-in. boxes. The bituminous material shall be protected from the box by a polypropylene bag.

#### 4. Identification Requirements

- a. Each box shall be labeled or tagged in such a manner that the information for sample identification and other quality control purposes can be read from the label without opening the box. Each box shall be identified by the manufacturer as to job number, loom number, production date and shift, tare weight of packaging materials, width and length of fabric on each roll, and net weight of fabric.
- b. Each box of bituminous material shall be labeled with nominal gross weight, nominal tare weight, nominal net weight, and lot or batch number.

#### 5. Sampling Requirements

- a. Each box may be subject to a fabric-weight determination on a per-box basis. In addition, individual test samples shall be cut from at least one roll selected at random from each 100 boxes or fraction thereof representing each shipment. Individual samples shall be no less than 3 ft in length by full-roll width.
- b. Each box of bituminous material shall be subject to a property determination on a per-box basis. In addition, individual boxes shall be selected at random from each truckload (700 boxes) or fraction thereof representing each shipment of material.

#### 6. Basis for Rejection

- a. Should any individual box fail to meet the fabric-weight requirement as determined by Subarticle 5, above, then that box is subject to rejection. Should any individual sample selected at random from 100 boxes (or fraction thereof) fail to meet any specification requirement, then that box shall be rejected and two additional samples shall be taken, one from each of two other additional boxes selected at random from the same 100-box lot (or fraction thereof). If either of these two additional samples fails to comply with any portion of the specification, then the entire quantity of boxes represented by that sample shall be rejected.
- b. Should any individual sample of bituminous material selected at random from 700 boxes or fraction thereof fail to meet any property specification requirement, then that box shall be rejected and two additional samples shall be taken, one from each of two other additional boxes selected at random from the same 700-box lot or fraction thereof. If either of these two additional samples fail to comply with any portion of the property

specification, then the entire quantity of boxes represented by that sample shall be rejected.

#### 4.3 Construction Method

##### 4.3.1 Precoated Fabric

1. General: The surface of the pavement adjacent to the joints and cracks shall be cleaned, by methods approved by the Engineer, to the extent recommended by the manufacturer.

The precoated fabric shall not be placed when the surface temperature of the pavement is below 50°F unless otherwise directed by the Engineer in writing. The surface of the pavement shall be dry.

Any spall which will cause a failure of the material to bond to the pavement or will leave a cavity under the material shall be corrected prior to the placement of the waterproofing membrane. Spalls shall be repaired as designated on the plans and in other sections of these specifications.

If the pavement temperature at time of placement is less than 70°F, the surface will be primed with a material recommended by the manufacturer prior to placement of the fabric. The primer will be placed on the concrete surface at a minimum rate of 300 sq ft per gallon, will extend 1 in. wider than the fabric, and will be allowed to dry until tack-free before applying the fabric. Primer will be placed on both portland cement concrete and asphaltic concrete pavements.

2. Installation: The fabric shall be installed in widths of 24 in. minimum and shall be centered over the joint within a 1-in. tolerance, unless otherwise shown on the plans. Transverse joints shall be sealed first, starting at the outside edge of pavement and extending the full length of the joints. The outside edge joint will be sealed after the transverse joint, with the overlap of the laps in the fabric placed in the same direction that the paving machine will travel. Laps will be permitted in both the transverse and longitudinal fabric with a minimum overlap of 2-1/2 in.

The fabric will be installed straight and wrinkle-free with no curled or uplifted edges. Any wrinkles over 3/8 in. in width shall be slit and folded down.

All fabric shall be surface dry before placement of the asphaltic concrete overlay. A tack coat consisting of AR = 4000 asphalt cement shall be applied to the fabric surface at a rate of 0.10 gallon per square yard.

3. Opening to Traffic: Repairs will be opened only to construction traffic and will be overlaid prior to opening to general traffic and within three days.

This limitation may be altered to meet manufacturer's requirements, as directed by the Engineer.

#### 4.3.2 Glass Fiber Woven Fabric

1. Equipment: Equipment shall consist of suitable sweepers, hand brooms, air compressor, pouring buckets, rubber-edged squeegees, cutting knives, and melting kettle. All hand tools shall be in a clean condition. Melting kettles shall be (a) double jacketed (recommended) or (b) single jacketed, propane heated with temperature controlling thermostat.
  - a. Double-Jacketed Melters: Set thermostat at 375°F. Kettles may be rapidly heated to desired temperature. Do not permit temperature to exceed 400°F.
  - b. Single-Jacketed Melters (propane heated only): Set thermostat at 375°F. Keep flame low until molten binder covers heated bottom of kettle to at least 3 or 4 in. Moderate heat may then be applied to reach and maintain 375°F ±25°F. Do not permit temperature to exceed 400°F.

Oil- or kerosene-fired, single-jacketed kettles do not permit proper heat control and should not be used under any circumstances.
2. Preparation of Surface: The pavement surface shall be thoroughly cleaned prior to the application of the material and shall be approved by the Engineer at the time of application. Repairs shall be made as designated in the plans and other sections of these specifications.
3. Application of Materials: The bituminous material, heated to a temperature within the specified range, shall be applied by means of a pouring bucket and squeegee. The material shall be applied with sufficient uniformity to prevent ridging or streaking and shall extend a minimum of 1 in. beyond all edges of the reinforcement fabric. Immediately following the application of the bituminous material, reinforcement fabric shall be placed on the hot bituminous material. Overlap by a minimum of 1 in. adjoining reinforcement strips. Wrinkles in reinforcement strips shall be avoided. Additional bituminous material shall be squeegeed on top of the reinforcement fabric. Application of bituminous material shall extend a minimum of 1 in. beyond all edges of the reinforcement fabric. Application rate of the bituminous material consisting of two coats shall be approximately 0.15 gallon per linear foot when used with 24-in. fabric. When proper thickness is achieved, reinforcement fabric shall be completely coated with no voids and



weave pattern of reinforcement fabric should be detectable through the top coat of bituminous material.

4. Weather Limitations: No material shall be applied when the air temperature is below 60°F and is falling, but may be applied when the air temperature is above 50°F and is rising. No materials shall be applied while the paved surface is wet. Care shall be taken to ensure pavement is thoroughly dry before work begins. Work shall be suspended if these conditions exist.
5. Opening to Traffic: Repairs will not be opened to construction traffic until a 30-minute set time has elapsed.

#### 4.4 Method of Measurement

Fabric joint treatment will be measured as the actual number of linear feet of reinforcement material complete in place measured along the centerline of longitudinal or transverse joints and cracks.

#### 4.5 Basis of Payment

Payment will be made under Item 7, Fabric Joint Treatment, per linear foot.

The unit contract price per linear foot for fabric joint treatment shall be full compensation for furnishing fabric and for surface preparation, filling of 1/4-in. to 1/2-in. cracks in existing asphalt, placement of fabric, and all other materials, tools, equipment, labor, and incidentals required for the construction of same.

5.0 JOINT INTERFACE REPAIR

5.1 Description

This work shall consist of placing plant-mixed asphalt concrete at the interface joint of the existing portland cement concrete/asphalt concrete (PCC/AC) pavement as shown on the plans and/or as directed by the Engineer.

5.2 Material

Materials shall meet the requirements of Class G asphalt concrete pavement as described in Section 5-04 of the Standard Specifications.

5.3 Construction Method

Construction methods and requirements shall be done in compliance with Section 5-04.3 of the Standard Specifications.

5.4 Method of Measurement

All joint interface repair will be measured by the linear foot along the line and slope of the completed repair.

5.5 Basis of Payment

Payment will be made under Item 11, Joint Interface Repair, per linear foot.

The unit contract price per linear foot for joint interface repair shall be full compensation for joint and surface preparation, tack coat, placement, compaction, and all other materials, tools, equipment, and labor required for the construction of same.

6.0 ASPHALT REMOVAL AND REPLACEMENT

6.1 Description

This item shall consist of removing the existing asphalt concrete pavement and replacing with new asphalt concrete prior to paving, at the locations shown on the plans and as directed by the Engineer.

6.2 Material

Materials shall comply with Section 9.0, Asphalt Concrete Pavement, of these specifications.

6.3 Construction Method

6.3.1 Removal

The Contractor shall saw cut the perimeter of the areas to be removed to the depths shown on the plans or as directed by the Engineer.

6.3.2 Replacement

The asphalt placement shall comply with Section 9.0, Asphalt Concrete Pavement, of these specifications.

6.4 Method of Measurement

The quantity of asphalt repair, removal, and replacement, complete, in place, and accepted, will be measured by the square yard.

6.5 Basis of Payment

Payment will be made under Item 5, Asphalt Repair, per square yard, and Item 9, Asphalt Pavement Removal and Replacement, per square yard.

The unit contract price per square yard for asphalt repair, removal, and replacement shall be full compensation for furnishing asphalt, saw cutting, material removal and surface preparation, placement, compaction, and all other materials, tools, equipment, labor, and incidentals required for the construction of same.

7.0 ASPHALT CRACK REPAIR

7.1 Description

This item shall consist of sealing cracks in the asphalt concrete pavement prior to paving by pouring the crack with crack sealing material at the locations shown on the plans and as directed by the Engineer.

7.2 Material

Materials shall comply with the requirements of Section 5-04.3(5)C of the Standard Specifications.

7.3 Construction Method

Construction methods shall comply with the requirements of Section 5-04.3(5)C of the Standard Specifications except as modified hereafter:

All cracks greater than 1/4 in. and less than 1/2 in. shall be filled with rubberized asphalt. Cracks larger than 1/2 in. shall be filled with a sand slurry.

7.4 Method of Measurement

Item 6, Crack Sealing, per linear foot, for cracks greater than 1/4 in. and less than 1/2 in.

Item 10, Asphalt Crack Repair, per linear foot, for cracks greater than 1/2 in.

The quantity of crack sealing, complete, in place, and accepted, will be measured in linear feet along the centerline of the crack on the surface of the pavement.

7.5 Basis of Payment

Payment will be made under Item 6, Crack Sealing, per linear foot, and Item 10, Asphalt Crack Repair, per linear foot.

The unit contract price per linear foot for asphalt crack repair shall be full compensation for furnishing crack sealant and for surface preparation, placement, and all other materials, tools, equipment, labor, and incidentals required for the construction of same.

## 8.0 TACK COAT

### 8.1 Description

This item shall consist of preparing and treating a bituminous or concrete surface with bituminous material in accordance with these specifications and in reasonably close conformity to the lines shown on the plans.

### 8.2 Materials

#### 8.2.1 Bituminous Materials

The bituminous material shall be emulsified asphalt CSS1 or CSS1h and shall conform to the requirements of Table 8.2.1-1.

TABLE 8.2.1-1. BITUMINOUS MATERIAL

Type and Grade	Specification	Application Temperature	
		(deg F)	(deg C)
Emulsified Asphalt CSS1, CSS1h	ASTM D 2397	75 to 130	25 to 55

### 8.3 Construction Methods

#### 8.3.1 Weather Limitations

The tack coat shall be applied only when the existing surface is dry and the atmospheric temperature is above 60°F (15°C). The temperature requirements may be waived, but only when so directed by the Engineer.

#### 8.3.2 Equipment

The Contractor shall provide equipment for heating and applying the bituminous material.

The distributor shall be designed, equipped, maintained, and operated so that bituminous material at even heat may be applied uniformly on variable widths of surface at the specified rate. The allowable variation from the specified rate shall not exceed 1%. Distributor equipment shall include tachometer, pressure gages, volume-measuring devices or a calibrated tank, and a thermometer for measuring temperatures of tank contents. The distributor shall be self-powered and shall be equipped with a power unit for the pump and full circulation spray bars adjustable laterally and vertically.

A power broom and/or blower shall be provided for any required cleaning of the surface to be treated.

#### 8.3.3 Application of Bituminous Material

Immediately before applying the tack coat, the full width of surface to be treated shall be swept with a power broom and/or airblast to remove all loose dirt and other objectionable material.

Emulsified asphalt shall be diluted by the addition of water when directed by the Engineer and shall be applied a sufficient time in advance of the paver to ensure that all water has evaporated before any of the overlying mixture is placed on the tacked surface.

The bituminous material including vehicle or solvent shall be uniformly applied with a bituminous distributor at the rate of 0.05 to 0.15 gallon per square yard, depending on the condition of the existing surface. The type of bituminous material and application rate shall be approved by the Engineer prior to application.

Following the application, the surface shall be allowed to cure without being disturbed for such period of time as may be necessary to permit drying out and setting of the tack coat. This period shall be determined by the Engineer. The surface shall then be maintained by the Contractor until the next course has been placed. Suitable precautions shall be taken by the Contractor to protect the surface against damage during this interval.

#### 8.3.4 Bituminous Material, Contractor's Responsibility

Samples of the bituminous material that the Contractor proposes to use, together with a statement as to its source and character, must be submitted and approved before use of such material begins. The Contractor shall require the manufacturer or producer of the bituminous material to furnish material subject to this and all other pertinent requirements of the contract. Only satisfactory materials so demonstrated by service tests shall be acceptable.

The Contractor shall furnish the vendor's certified test reports for each carload, or equivalent, of bituminous material shipped to the project. The report shall be delivered to the Engineer before permission is granted for use of the material. The furnishing of the vendor's certified test report for the bituminous material shall not be interpreted as a basis for final acceptance. All such test reports shall be subject to verification by testing samples of material received for use on the project.

#### 8.3.5 Freight and Weigh Bills

Before the final estimate is allowed, the Contractor shall file with the Engineer receipted bills when railroad shipments are made, and certified weigh bills when materials are received in any other manner, of the bituminous materials actually used in the construction

covered by the contract. The Contractor shall not remove bituminous material from the tank car or storage tank until the initial outage and temperature measurements have been taken by the Engineer, nor shall the car or tank be released until the final outage has been taken by the Engineer. Copies of freight bills and weigh bills shall be furnished to the Engineer during the progress of the work.

8.4 Method of Measurement

The bituminous material for tack coat shall be measured by the gallon. Water added to emulsified asphalt will not be measured for payment.

8.5 Basis of Payment

Payment will be made under Item 12, Tack Coat, per gallon.

Payment shall be made at the contract unit price per gallon of bituminous material. This price shall be full compensation for furnishing all materials; for all preparation, delivery, and application of these materials; and for all labor, equipment, tools, and incidentals necessary to complete the item.

8.6 Material Requirements

ASTM D 2397

Cationic Emulsified Asphalt

Asphalt Institute  
Manual MS-6, Table IV-3

Temperature-Volume Corrections for  
Emulsified Asphalts

## 9.0 ASPHALT CONCRETE PAVEMENT

### 9.1 Description

This item shall consist of a surface course composed of mineral aggregate and bituminous material mixed in a central mixing plant and placed on a prepared course in accordance with these specifications and shall conform to the lines, grades, thicknesses, and typical cross sections shown on the plans.

Each course shall be constructed to the depth, typical section, or elevation required by the plans and shall be rolled, finished, and approved before the placement of the next course.

### 9.2 Materials

#### 9.2.1 Aggregate

Aggregates shall consist of crushed stone, crushed gravel, or crushed slag with or without sand or other inert finely divided mineral aggregate. The portion of material retained on the No. 8 sieve shall be known as coarse aggregate, the portion passing the No. 8 sieve and retained on the No. 200 sieve as fine aggregate, and the portion passing the No. 200 sieve as mineral filler.

1. Coarse Aggregate: Coarse aggregate shall consist of sound, tough, durable particles, free from adherent films of matter that would prevent thorough coating with the bituminous material. The percentage of wear shall not be greater than 40% when tested in accordance with ASTM C 131. The sodium sulfate soundness loss shall not exceed 9%, after five cycles, when tested in accordance with ASTM C 88.

Aggregate shall contain at least 70% by weight of crushed pieces having two or more fractured faces and 85% having at least one fractured face. The area of each face shall be equal to at least 75% of the smallest midsectional area of the piece. When two fractured faces are contiguous, the angle between the planes of fractures shall be at least 30 degrees to count as two fractured faces. Fractured faces shall be obtained by artificial crushing.

The aggregate shall not contain more than 8%, by weight, of flat or elongated pieces. A flat particle is one having a ratio of width to thickness greater than 5; an elongated particle is one having a ratio of length to width greater than 5.

2. Fine Aggregate: Fine aggregate shall consist of clean, sound, durable, angular particles produced by crushing stone, slag, or gravel that meets the requirements for wear and soundness specified for coarse aggregate. The aggregate particles shall be free from coatings of clay, silt, or other objectionable



matter and shall contain no clay balls. The fine aggregate, including any blended filler, shall have a plasticity index of not more than 6 when tested in accordance with ASTM D 424, and a liquid limit of not more than 25 when tested in accordance with ASTM D 423.

Natural sand may be used to obtain the gradation of the aggregate blend or to improve the workability of the mix. The amount of sand to be added will be adjusted to produce mixtures conforming to requirements of these specifications.

3. Sampling and Testing: ASTM D 75 shall be used in sampling coarse and fine aggregate, and ASTM C 183 shall be used in sampling mineral filler. The Contractor shall furnish documentation to the Engineer confirming that the aggregates meet specification requirements.
4. Sources of Aggregates: Sources of aggregates shall be selected well in advance of the time the materials are required in the work. When the aggregates are obtained from a previously approved source or an existing source producing aggregates that has a satisfactory service record in airport bituminous pavement construction for at least five years, samples shall be submitted seven days prior to start of production. An inspection of the producer's operation will be made by the Engineer. When new sources are to be developed, the Contractor shall indicate the sources and shall submit a plan for operation 14 days in advance of starting production. Samples from test pits, borings, and other excavations shall be submitted at the same time. Approval of the source of aggregate does not relieve the Contractor in any way of the responsibility for delivery at the job site of aggregates that meet the requirements specified herein.
5. Samples of Aggregates: Samples of aggregates shall be furnished by the Contractor at the start of production and at intervals during production of bituminous mixtures. The sampling points and intervals will be designated by the Engineer. The samples will be the basis of approval of specific lots of aggregates from the standpoint of the quality requirements of this section.

#### 9.2.2 Filler

If filler, in addition to that naturally present in the aggregate, is necessary, it shall meet the requirements of ASTM D 242.

#### 9.2.3 Bituminous Material

Bituminous material shall conform to the requirements of asphalt cement viscosity Grade AR-4000 per ASTM D 3381.

The Contractor shall furnish vendor's certified test reports for each tankload of bitumen shipped to the project. The report shall be delivered to the Engineer before permission is granted for use of the material. The furnishing of the vendor's certified test report for the bituminous material shall be the basis for final acceptance.

### 9.3 Composition

#### 9.3.1 Composition of Mixture

The bituminous plant mix shall be composed of a mixture of aggregate, filler if required, and bituminous material. The several aggregate fractions shall be sized, uniformly graded, and combined in such proportions that the resulting mixture meets the grading requirements of the job mix formula.

#### 9.3.2 Job Mix Formula

No bituminous mixture shall be produced for payment until the Contractor has submitted samples of the materials and the Engineer has established a satisfactory job mix formula for each mixture to be used. The formula shall be submitted in writing by the Engineer to the Contractor at least five days prior to the start of paving operations and shall indicate the definite percentage of each sieve fraction of aggregate, the percentage of bitumen, and the temperature of the completed mixture when discharged from the mixer. All test data used to develop the job mix formula shall also be submitted. The job mix formula for each mixture shall be in effect until modified in writing by the Engineer. Should a change in sources of materials be made, a new job mix formula must be established before the new material is used.

The bituminous mixture shall be designed using procedures contained in Chapter III, Marshall Method of Mix Design, of the Asphalt Institute's Manual Series No. 2 (MS-2), current edition, and shall meet the requirements of Tables 9.3.2-1 and 9.3.2-2. The temperature of the mix immediately prior to compaction shall be 250°F ±5°F (12°C ±3°C).

The mineral aggregate shall be of such size that the percentage composition by weight, as determined by laboratory screens, will conform to the gradation or gradations specified in Table 9.3.2-3 when tested in accordance with ASTM Standard C 136 d (dry sieve). The percentage by weight for the bituminous material shall be within the limits specified. The gradations in Table 9.3.2-3 represent the limits which shall determine the suitability of aggregate for use from the sources of supply. The aggregate, as finally selected, shall have a gradation within the limits designated in Table 9.3.2-3 and shall not vary from the low limit on one sieve to the high limit on the adjacent sieve, or vice versa, but shall be uniformly graded from coarse to fine.

TABLE 9.3.2-1. MARSHALL DESIGN CRITERIA

Test Property	Pavements Designed for Aircraft Gross Weights of 60,000 lb or More or Tire Pressure Greater Than 100 psi	
Number of blows		75
Stability, lb (N) minimum		1800 (8000)
Flow, 0.01 in. (0.25 mm)		8 to 16
Percent air voids, surface		3 to 5
Percent air voids, base		3 to 5
Percent voids in mineral aggregate		See Table 9.3.2-2

TABLE 9.3.2-2. MINIMUM PERCENT  
VOIDS IN MINERAL AGGREGATE

Maximum Particle Size (Table 9.3.2-3) (in.)                      (mm)		Minimum Voids in Mineral Aggregate (percent)
1/2	12.5	16
3/4	19.0	15
1	25.0	14
1-1/4	31.25	13
1-1/4	31.25	16

TABLE 9.3.2-3. AGGREGATE, BITUMINOUS PAVEMENTS

Sieve Size	Percentage by Weight Passing Sieves 3/4 in. maximum
1-1/4 in. (30.0 mm)	---
1 in. (24.0 mm)	---
3/4 in. (19.0 mm)	100
1/2 in. (12.5 mm)	79 to 99
3/8 in. ( 9.5 mm)	68 to 88
No. 4 ( 4.75 mm)	48 to 68
No. 8 ( 2.36 mm)	33 to 53
No. 16 ( 1.18 mm)	20 to 40
No. 30 ( 0.600 mm)	14 to 30
No. 50 ( 0.300 mm)	9 to 21
No. 100 ( 0.150 mm)	6 to 16
No. 200 ( 0.075 mm)	3 to 6
Bitumen percent	5.0 to 7.5

The job mix tolerances shown in Table 9.3.2-4 shall be applied to the job mix formula to establish a job control grading band. The full tolerances still will apply if application of the job mix tolerances results in a job control grading band outside the master grading band.

TABLE 9.3.2-4. JOB MIX FORMULA TOLERANCES  
(based on a single test)

Material	Tolerance
Aggregate passing No. 4 sieve or larger	±7%
Aggregate passing Nos. 8 and 16 sieves	±6%
Aggregate passing Nos. 30 and 50 sieves	±5%
Aggregate passing Nos. 100 and 200 sieves	±3%
Bitumen	±0.45%
Temperature of mix	±20°F (±11°C)

The aggregate gradation may be adjusted within the limits of Table 9.3.2-3 as directed, without adjustments in the contract unit prices.

Deviation from the final approved design for bitumen content and gradation of aggregates shall not be greater than the tolerances permitted and shall be based on daily plant extraction. Extraction tests for bitumen content and aggregate gradation will be made at least twice daily. The mixture will be tested for bitumen content in accordance with ASTM D 2172 and for aggregate gradation in accordance with AASHTO T30.

The completed mixture shall be sampled to retain job control. One sample shall be taken at the beginning of each paving period. Additional samples shall be taken during a paving period, at the discretion of the Engineer, to verify that the design requirements are being met. A paving period is defined as the beginning of a construction phase. Testing shall be in accordance with the Marshall method procedures contained in Chapter III of the Asphalt Institute's Manual Series No. 2 (MS-2), current edition, except the temperature of the mix prior to compaction shall be 250°F ±5°F (121°C ±2°C). If any two consecutive Marshall test results of any property do not conform to the requirements shown in Tables 9.3.2-1 and 9.3.2-2, the Contractor shall take immediate corrective action. In no instance shall the percent air voids exceed ±1% of the job mix formula value.

The Engineer may halt production if the Marshall test criteria are not met and not allow it to resume until the problem is corrected.

#### 9.4 Construction Methods

##### 9.4.1 Weather Limitations

The bituminous mixture shall not be placed upon a wet surface or when the surface temperature of the underlying course is less than specified in Table 9.4.1-1. The temperature requirements may be waived, but only at the discretion of the Engineer.

TABLE 9.4.1-1. BASE TEMPERATURE LIMITATIONS

Mat Thickness	Base Temperature (minimum)
3 in. (7.5 cm) or greater	40°F ( 4°C)
Greater than 1 in. (2.5 cm) but less than 3 in. (7.5 cm)	45°F ( 7°C)
1 in. (2.5 cm) or less	50°F (10°C)

#### 9.4.2 Bituminous Mixing Plant

Plants used for the preparation of bituminous mixtures shall conform to the requirements of ASTM D 995 with the following changes:

##### 1. Requirements for All Plants

- a. Truck Scales: The bituminous mixture shall be weighed on approved scales furnished by the Contractor, or on public scales at the Contractor's expense. Such scales shall be inspected and sealed as often as the Engineer deems necessary to assure their accuracy. Scales shall conform to the requirements of the Standard Specifications.
- b. Plant Production: The plant used shall have a minimum production capacity of 275 tons per hour.
- c. Inspection of Plant: The Engineer, or his authorized representative, shall have access, at all times, to all parts of the plant for checking adequacy of equipment; inspecting operation of the plant; verifying weights, proportions, and character of materials; and checking the temperatures maintained in the preparation of the mixtures.
- d. Storage Bins and Surge Bins: Paragraph 3.9 of ASTM D 995 is deleted. Instead, the following applies. Use of surge bins or storage bins for temporary storage of hot bituminous mixtures will be permitted as follows:
  - (1) The bituminous mixture may be stored in surge bins for a period of time not to exceed 3 hours.
  - (2) The bituminous mixture may be stored in insulated storage bins for a period of time not to exceed 24 hours, provided an inert gas atmosphere is maintained in the bin during the storage period.

The bins shall be such that mix drawn from them meets the same requirements as mix loaded directly into trucks.

If the Engineer determines that there is an excessive amount of heat loss, segregation, or oxidation of the mixture due to temporary storage, no overnight storage will be allowed.

#### 9.4.3 Hauling Equipment

Trucks used for hauling bituminous mixtures shall have tight, clean, and smooth metal beds. To prevent the mixture from adhering to them, the truck beds shall be lightly coated with a minimum amount of paraffin oil, lime solution, or other approved material. Each truck shall have a suitable cover to protect the mixture from adverse weather. When necessary, to ensure that the mixture will

be delivered to the site at the specified temperature, truck beds shall be insulated and covers shall be securely fastened.

#### 9.4.4 Bituminous Pavers

Bituminous pavers shall be self-contained, power-propelled units with an activated screed or strike-off assembly, heated if necessary, and shall be capable of spreading and finishing courses of bituminous plant mix material which will meet the specified thickness, smoothness, and grade. Pavers used for shoulders and similar construction shall be capable of spreading and finishing courses of bituminous plant mix material in widths shown on the plans.

The paver shall have a receiving hopper of sufficient capacity to permit a uniform spreading operation. The hopper shall be equipped with a distribution system to place the mixture uniformly in front of the screed. The screed or strike-off assembly shall effectively produce a finished surface of the required evenness and texture without tearing, shoving, or gouging the mixture.

The paver shall be capable of operating at forward speeds consistent with satisfactory laying of the mixture.

The paver shall be equipped with a control system capable of automatically maintaining the specified screed elevation. The control system shall be automatically actuated from either a reference line or surface through a system of mechanical sensors or sensor-directed mechanisms or devices which will maintain the paver screed at a predetermined transverse slope and at the proper elevation to obtain the required surface. The transverse slope controller shall be capable of maintaining the screed at the desired slope within  $\pm 0.1\%$ .

The controls shall be capable of working in conjunction with any of the following attachments:

1. Ski-type device of not less than 30 ft (9.14 m) in length or as directed by the Engineer
2. Taut stringline (wire) set to grade

A taut stringline (wire) set to grade shall be used for all leveling courses and the wearing course passes abutting the runway centerline.

#### 9.4.5 Rollers

Rollers of the vibratory, steel wheel, or pneumatic-tired type may be used. They shall be in good condition, capable of operating at slow speeds to avoid displacement of the bituminous mixture. The number, type, and weight of rollers shall be sufficient to compact the mixture to the required density while it is still in a workable

condition. The use of equipment which causes excessive crushing of the aggregate will not be permitted.

#### 9.4.6 Preparation of Bituminous Material

The bituminous material shall be heated in a manner that will avoid local overheating and provide a continuous supply of the bituminous material to the mixer at a uniform temperature. The temperature of the bituminous material delivered to the mixer shall be sufficient to provide a suitable viscosity for adequate coating of the aggregate particles but shall not exceed 325°F (160°C).

#### 9.4.7 Preparation of Mineral Aggregate

The aggregate for the mixture shall be dried and heated to the temperature designated by the job formula within the job tolerance specified. The maximum temperature and rate of heating shall be such that no permanent damage occurs to the aggregates. Particular care shall be taken that aggregates high in calcium or magnesium content are not damaged by overheating. The temperature shall not be lower than is required to obtain complete coating and uniform distribution on the aggregate particles and to provide a mixture of satisfactory workability.

#### 9.4.8 Preparation of Bituminous Mixture

The aggregates and the bituminous material shall be weighed or metered and introduced into the mixer in the amount specified by the job mix formula.

The combined materials shall be mixed until the aggregate obtains a uniform coating of bitumen and is thoroughly distributed throughout the mixture. Wet mixing time shall be the shortest time that will produce a satisfactory mixture. It shall be established by the Contractor, based on the procedure for determining the percentage of coated particles described in ASTM D 2489, and approved by the Engineer for each individual plant and for each type of aggregate used. The minimum mixing time shall be 25 seconds. The mixing time will be set to achieve 95% of coated particles. For continuous mix plants, the minimum mixing time shall be determined by dividing the weight of its contents at operating level by the weight of the mixture delivered per second by the mixer. The moisture content of the mix shall not exceed 1%.

#### 9.4.9 Transporting, Spreading, and Finishing

The mixture shall be transported from the mixing plant to the point of use in vehicles conforming to the requirements of the Standard Specifications. Deliveries shall be scheduled so that spreading and rolling of all mixture prepared for one day's run can be completed during daylight. Hauling over freshly placed material shall not be permitted until the material has been compacted, as specified, and allowed to cool to atmospheric temperature.



Immediately before placing the bituminous mixture, the underlying course shall be cleared of all debris with power blowers, power brooms, or hand brooms, as directed.

The mix shall be placed at a temperature of not less than 250°F (107°C) when asphalt cement is used.

Upon arrival, the mixture shall be spread to the full width by an approved bituminous paver. It shall be struck off in a uniform layer of such depth that, when the work is completed, it shall have the required thickness and conform to the grade and contour indicated. The speed of the paver shall be regulated to eliminate pulling and tearing of the bituminous mat. Unless otherwise directed, placement of the mixture shall begin along the centerline of a crowned section or on the high side of areas with a one-way slope. The mixture shall be placed in consecutive adjacent strips having a minimum width of 8 ft, except where edge lanes require less width to complete the area. The longitudinal joint in one layer shall offset that in the layer immediately below by at least 1 ft (30 cm); however, the joint in the top layer shall be at the centerline of the pavement. Transverse joints in one layer shall be offset by at least 2 ft (60 cm) from transverse joints in the previous layer. Transverse joints in adjacent lanes shall be offset a minimum of 10 ft (3 m).

On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the mixture may be spread, raked, and luted by hand tools.

#### 9.4.10 Compaction of Mixture

After spreading, the mixture shall be thoroughly and uniformly compacted by rolling. The surface shall be rolled when the mixture has attained sufficient stability so that the rolling does not cause undue displacement, cracking, or shoving. The sequence of rolling operations and the type of rollers used shall be at the discretion of the Contractor.

The speed of the roller shall, at all times, be sufficiently slow to avoid displacement of the hot mixture. Any displacement occurring as a result of reversing the direction of the roller, or from any other cause, shall be corrected at once.

Sufficient rollers shall be furnished to handle the output of the plant. Rolling shall continue until all roller marks are eliminated, the surface is of uniform texture and true to grade and cross section, and the required field density is obtained.

To prevent adhesion of the mixture to the roller, the wheels shall be kept properly moistened, but excessive water will not be permitted.

In areas not accessible to the roller, the mixture shall be thoroughly compacted with hot hand tampers.

Any mixture that becomes loose and broken, mixed with dirt, or in any way defective shall be removed and replaced with fresh hot mixture and immediately compacted to conform to the surrounding area. This work shall be done at the Contractor's expense. Skin patching shall not be allowed.

#### 9.4.11 Joints

The formation of all joints shall be made in such a manner as to ensure a continuous bond between old and new sections of the course. All joints shall have the same texture, density, and smoothness as other sections of the course.

The roller shall not pass over the unprotected end of the freshly laid mixture except when necessary to form a transverse joint. When necessary to form a transverse joint, it shall be made by means of placing a bulkhead or by tapering the course, in which case the edge shall be cut back to its full depth and width on a straight line to expose a vertical face. In both methods, all contact surfaces shall be given a tack coat of bituminous material before placing any fresh mixture against the joint.

Longitudinal joints which are irregular, damaged, or otherwise defective shall be cut back to expose a clean, sound surface for the full depth of the course. All contact surfaces shall be given a tack coat of bituminous material prior to placing any fresh mixture against the joint.

Feathered joints at existing paved surfaces shall be poured with liquid asphalt after the new asphalt has cured for a minimum of 24 hours.

#### 9.4.12 Acceptance Sampling and Testing of Bituminous Mixture (density)

Pavement density will be determined by comparing the density obtained using the nuclear density gauge in accordance with ASTM D 2950 taken from the compacted pavement to the density of laboratory-compacted specimens.

1. Density measurements will be made every 200 ft on each strip.
2. Laboratory Density: Bituminous mixture for laboratory-compacted specimens shall be sampled from the paving hopper or on the grade, at the direction of the Engineer. One sample shall be taken at the beginning of each paving period or more often, at the discretion of the Engineer, in accordance with procedures contained in ASTM D 3665. Three laboratory-compacted specimens shall be prepared from each sample.

The specimens shall be compacted in accordance with ASTM D 1559, Section 3.5, except that the temperature immediately prior to compaction shall be 250°F ±5°F (120°C ±3°C). The sample of bituminous mixture can be placed in an oven for not more than 39 minutes to maintain the heat, but it shall not be reheated if it cools below 250°F (120°C) before use. The density of each specimen shall be determined in accordance with ASTM D 2726 or D 1188, whichever is applicable.

3. Pavement Density: The target (percent compaction) of each lot of in-place pavement shall be 98% of the average density of the laboratory-prepared specimens. The pavement density shall be determined by dividing the nuclear density of each test by the average density of the laboratory-prepared specimens. The density shall not be greater than 110% of the average density of the laboratory-prepared specimens.
4. Acceptance Criteria: Acceptance of each 1000 tons of bituminous surface course shall be based on the percentage of material within specification limits (PWL). The PWL is determined using standard statistical techniques and involves the number of tests in each lot (n) and the quality index (Q). The quality index is calculated from the following formula:

$$Q = \frac{X - L}{R}$$

where

Q = Quality index

X = Average of pavement densities (percent compaction)

L = Lower specification limit (98%)

R = Range - difference between the highest and lowest pavement densities (percent compaction)

The PWL shall be determined from Table 9.4.12-1, using the number of tests (n) and the quality index (Q).

Each lot of bituminous mix shall be accepted for density when the PWL equals or exceeds 90%. Each lot not meeting the 90% PWL requirement will be accepted at an adjusted contract unit price in accordance with Table 9.4.12-2.

#### 9.4.13 Surface Tests

Tests for conformity with the specified crown and grade shall be made by the Contractor immediately after initial compaction. Any variation shall be corrected by the removal or addition of materials and by continuous rolling.

TABLE 9.4.12-1. TABLE FOR ESTIMATING PERCENT  
OF LOT WITHIN TOLERANCE LIMITS

Percent within Limits	Positive Values of Q			
	n = 3	n = 4	n = 5	n = 6
99	0.5895	0.6574	0.6642	0.6611
98	0.5879	0.6440	0.6387	0.6264
97	0.5863	0.6307	0.6166	0.5983
96	0.5847	0.6173	0.5966	0.5744
95	0.5830	0.6039	0.5777	0.5530
94	0.5814	0.5905	0.5600	0.5330
93	0.5797	0.5771	0.5431	0.5143
92	0.5762	0.5638	0.5267	0.4968
91	0.5219	0.5504	0.5108	0.4800
90	0.5677	0.5370	0.4955	0.4640
89	0.5621	0.5236	0.4808	0.4485
88	0.5564	0.5101	0.4657	0.4337
87	0.5499	0.4967	0.4514	0.4191
86	0.5432	0.4833	0.4373	0.4050
85	0.5355	0.4699	0.4234	0.3913
84	0.5275	0.4565	0.4097	0.3778
83	0.5189	0.4431	0.3962	0.3647
82	0.5098	0.4297	0.3829	0.3517
81	0.5001	0.4162	0.3697	0.3391
80	0.4889	0.4028	0.3567	0.3266
79	0.4791	0.3894	0.3438	0.3144
78	0.4679	0.3760	0.3311	0.3023
77	0.4560	0.3526	0.3184	0.2902
76	0.4439	0.3492	0.3059	0.2785
75	0.4311	0.3358	0.2935	0.2669
74	0.4179	0.3223	0.2811	0.2554
73	0.4041	0.3088	0.2689	0.2440
72	0.3901	0.2954	0.2567	0.2327
71	0.3754	0.2820	0.2446	0.2215
70	0.3604	0.2685	0.2325	0.2104
69	0.3450	0.2551	0.2206	0.1995
68	0.3293	0.2417	0.2086	0.1884
67	0.3131	0.2283	0.1968	0.1777
66	0.2965	0.2149	0.1835	0.1668
65	0.2798	0.2015	0.1732	0.1562

TABLE 9.4.12-1. TABLE FOR ESTIMATING PERCENT  
OF LOT WITHIN TOLERANCE LIMITS (continued)

Percent within Limits	Positive Values of Q			
	n = 3	n = 4	n = 5	n = 6
64	0.2625	0.1881	0.1614	0.1455
63	0.2451	0.1747	0.1497	0.1349
62	0.2274	0.1611	0.1382	0.1243
61	0.2093	0.1477	0.1265	0.1139
60	0.1911	0.1343	0.1149	0.1034
55	0.0970	0.0672	0.0573	0.0515
50	0.0000	0.0000	0.0000	0.0000

All negative values of Q will result in a PWL below 65%.

TABLE 9.4.12-2. PRICE ADJUSTMENT SCHEDULE

Percentage of Material Above the Specification Limit (PWL)	Percent of Contract Unit Price to be Paid
90 to 100	100
80 to 90	0.5 PWL + 55.0
65 to 80	2.0 PWL - 65.0
Below 65*	

\* The lot shall be removed and replaced. However, the Engineer may decide to accept the deficient lot. In that case, if the Engineer and Contractor agree in writing, that lot shall not be removed, and it will be paid for at 50% of the contract price.

The finished surface shall not vary more than 1/4 in. for the surface course when tested with a 16-ft (4.8-m) straightedge applied parallel with, or at right angles to, the centerline.

After the completion of final rolling, the smoothness of the course shall be tested by the Engineer. Humps or depressions exceeding the specified tolerances shall be immediately corrected by removing the defective work and replacing with new material, as directed by the Engineer. This shall be done at the Contractor's expense.

The finished surfaces of bituminous courses shall not vary from the gradeline, elevations, and cross sections shown on the contract drawings by more than 1/2 in. (12.70 mm). The Contractor shall correct pavement areas varying in excess of this amount by replacing the defective work. Skin patching will not be permitted.

9.5 Method of Measurement

Plant mix asphalt concrete pavement shall be measured by the number of tons of bituminous mixture used in the accepted work. Recorded batch weights or truck scale weights will be used to determine the basis for the tonnage.

9.6 Basis of Payment

Payment will be made under Item 13, Asphalt Concrete Pavement, per ton.

Payment for an accepted asphalt concrete pavement shall be made at the full or adjusted contract unit price per ton. The price shall be full compensation for furnishing all materials; for all preparation, mixing, and placing of these materials; and for all labor, equipment, tools, and incidentals necessary to complete the item.

9.6.1 Basis of Adjusted Payment

Table 9.4.12-2 shall be used to determine the adjusted contract price for a lot of material when the results of the pavement density tests for that lot indicate that the percentage of material above the specification limit is less than 90%.

9.7 Testing Requirements

ASTM C 29	Unit Weight of Aggregate
ASTM C 88	Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C 131	Resistance to Abrasion of Small Size Coarse Aggregate by Use of the Los Angeles Machine
ASTM C 136	Sieve or Screen Analysis of Fine and Coarse Aggregates

ASTM C 183	Sampling Hydraulic Cement
ASTM D 75	Sampling Aggregates
ASTM D 423	Liquid Limit of Soils
ASTM D 424	Plastic Limit and Plasticity Index of Soils
ASTM D 995	Requirements for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures
ASTM D 1075	Effect of Water on Cohesion of Compacted Bituminous Mixtures
ASTM D 1188	Bulk Specific Gravity of Compacted Bituminous Mixtures Using Paraffin-Coated Specimens
ASTM D 1559	Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus
ASTM D 2172	Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
ASTM D 2489	Degree of Particle Coating of Bituminous-Aggregate Mixtures
ASTM D 2726	Bulk Specific Gravity of Compacted Bituminous Mixtures Using Saturated Surface-Dry Specimens
ASTM D 2950	
ASTM D 3665	Random Sampling of Paving Materials
ASTM D 3666	Inspection and Testing Agencies for Bituminous Paving Materials
AASHTO T30	Mechanical Analysis of Extracted Aggregate
The Asphalt Institute's Series (SS-1)	Model Construction Specifications for Asphalt Concrete and Other Plant-Type Mixes
The Asphalt Institute's Manual No. 2 (MS-2)	Mix Design Methods for Asphalt Concrete

#### 9.8 Material Requirements

ASTM D 242	Mineral Filler for Bituminous Paving Mixtures
ASTM D 490	Tar

ASTM D 946	Asphalt Cement for Use in Pavement Construction
ASTM D 3381	Viscosity-Graded Asphalt Cement for Use in Pavement Construction
AASHTO M226	Viscosity-Graded Asphalt Cement



10.0 RUNWAY AND TAXIWAY PAINTING

10.1 Description

This item shall consist of preparing and placing temporary and permanent pavement markings in accordance with these plans and specifications and as directed by the Engineer.

10.2 Materials

10.2.1 Paint, Permanent

Paint shall meet the requirements of Federal Specification TT-P-85 for oil base paint. Color shall be white or yellow.

10.2.2 Paint, Temporary

Paint shall be a white latex house paint.

10.3 Construction Methods

10.3.1 Weather Limitations, Permanent

The painting shall be performed only when the surface is dry, when the atmospheric temperature is above 45°F (7°C), and when the weather is not foggy or windy.

10.3.2 Equipment, Permanent

All equipment for the work shall be approved by the Engineer and shall include the apparatus necessary to properly clean the existing surface, a mechanical marking machine, and such auxiliary hand-painting equipment as may be necessary to satisfactorily complete the job.

The mechanical marker shall be an atomizing spray-type marking machine suitable for application of traffic paint. It shall produce an even and uniform film thickness at the required coverage and shall be designed so as to apply markings of uniform cross sections and clear-cut edges without running or spattering.

10.3.3 Preparation of Surface

Immediately before application of the paint, the surface shall be dry and free from dirt, grease, oil, laitance, or other foreign material which would reduce the bond between the paint and the pavement. The area to be painted shall be cleaned by sweeping and blowing or by other methods as required to remove all dirt, laitance, and loose materials.

#### 10.3.4 Layout of Markings

On those sections of pavement where no previously applied markings are available to serve as a guide, the proposed markings shall be laid out in advance of the paint application. The Engineer will provide control points for the markings.

#### 10.3.5 Application, Permanent

Markings shall be applied at the locations and to the dimensions and spacing shown on the plans. Paint shall not be applied until the layout and condition of the surface have been approved by the Engineer. Color of paint shall match existing marking color.

The paint shall be mixed in accordance with the manufacturer's instructions and applied to the pavement with a marking machine at the rate of 100 to 110 square feet per gallon. The addition of thinner will not be permitted. A period of 24 hours shall elapse between placement of a wearing course and application of the paint.

The edges of the markings shall not vary from a straight line more than 1/2 in. (12 mm) in 50 ft (15 m), and the dimensions shall be within a tolerance of  $\pm 5\%$ .

The Contractor shall furnish certified test reports for the materials shipped to the project. The reports shall not be interpreted as a basis for final acceptance. The Contractor shall notify the Engineer upon arrival of a shipment of paint to the job site. All emptied containers shall be returned to the paint storage area for checking by the Engineer. The containers shall not be removed from the airport or destroyed until authorized by the Engineer.

#### 10.3.6 Protection

After application of the paint, all markings shall be protected from damage until the paint is dry. All surfaces shall be protected from disfiguration by spatter splashes, spillage, or drippings of paint.

#### 10.3.7 Application and Cleanup, Temporary

Markings shall be applied at the locations and to the dimensions and spacing shown on the plans. Paint shall not be applied until the layout and condition of the surface have been approved by the Engineer.

The paint may be diluted with water, as long as the temporary markings are readily visible by airborne aircraft to the satisfaction of the Engineer.

The edges of the markings shall not vary from a straight line more than 1/2 in. (12 mm) in 50 ft (15 m), and the dimensions shall be within a tolerance of  $\pm 5\%$ .

The Contractor shall remove the temporary markings from the new wearing course surface with a light bath of methyl ethyl ketone (MEK) or approved solvent and then wash with high-pressure water.

Temporary markings shall be refreshed by the Contractor as determined by the Engineer.

10.4 Method of Measurement

The quantity of permanent and temporary runway and taxiway markings to be paid for shall be one complete item in place performed in accordance with the specifications and accepted by the Engineer.

10.5 Basis of Payment

Payment will be made under Item 14, Pavement Markings, lump sum.

Payment shall be made at the contract lump sum for pavement markings. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

10.6 Material Requirements

Fed Spec      Paint, Traffic and Airfield Marking, Oil Base  
TT-P-85

## 11.0 PAVEMENT GROOVING

### 11.1 Description

This specification covers grooving of the newly finished surface of the runway. Grooving to be constructed in accordance with these specifications and at the locations as shown on the plans.

### 11.2 Construction Method

#### 11.2.1 Grooving Method

Grooving shall be done utilizing diamond blades or abrasive blades, mounted on a multiblade arbor on a self-propelled machine which has been built for grooving of pavements. The groover should have a depth control device which will detect variations in the pavement surface and adjust the cutting head height to maintain the depth of the groove specified. The grooving machine will be provided with devices to control alignment. Flailing type grooving will not be permitted.

#### 11.2.2 Layout and Alignment

Suitable layouts and lines of proposed grooving shall be spotted in advance of the grooving operation. Control points shall be spaced at such intervals as will ensure accurate location of the grooves. Alignment at the grooving limits shall not deviate from a straight line by more than 6 in. The Contractor shall provide an experienced technician to supervise the location alignment, layout, dimensions, and grooving of the pavement.

#### 11.2.3 Groove Pattern

Grooving of the newly resurfaced runway with asphalt shall not commence until the asphalt surface has cured for approximately 72 hours. This time will help provide the curing necessary for the material to become stable enough to prevent closing of the grooves under normal use.

Grooves shall be continuous for the complete length of the runway and normal to its centerline. The grooves shall be terminated at the grooving limits. The groove pattern shall be 1/4 in. (6.35 mm) wide x 1/4 in. (6.35 mm) deep with center-to-center spacing of 1-1/2 in. The groove spacing tolerance shall be  $\pm 1/8$  in. ( $\pm 3.175$  mm). The depth and width of groove shall have a tolerance of  $\pm 1/16$  in. ( $\pm 1.587$  mm).

These tolerances are outlined below:

1. The width of the groove shall not be more than 5/16 in. (7.937 mm) or be less than 3/16 in. (4.762 mm).

2. The depth of the groove shall not be more than 5/16 in. (7.937 mm) or be less than 3/16 in. (4.762 mm).
3. The grooves shall be parallel to each other and perpendicular to the centerline of the runway with allowable variation from the perpendicular limited to  $\pm 2$  in. in alignment for 65 ft.
4. The spacing of the grooves shall not exceed 1-5/8 in. (41.275 mm) or be less than 1-3/8 in. (34.925 mm) for 1-1/2 in. (38.1 mm) center-to-center dimension.

#### 11.2.4 Cleanup, Diamond Blades

The removal of all slurry resulting from the grooving operation shall be continuous. Pavement must be immediately left in a washed clean condition, free of all slipperiness from the slurry, etc. All debris and surplus material removed from the grooving operations shall be disposed of in an area off the edge of the paved surface. This disposal area may be on either side of the runway. Grassed area with a buildup of 1 in. (25.4 mm) or over of slurry shall be raked and spread out so that buildup does not exceed 1 in. (25.4 mm). Slurry removed from the runway and shoulders shall not be allowed to enter the storm sewer inlets.

#### 11.2.5 Cleanup, Abrasive Blades

The vacuum removal of dry residue from grooving operation shall be continuous. The pavement shall be left in a clean condition. All residue from the grooving operation shall be removed from the paved surface and disposed of in an approved area.

#### 11.2.6 Water

Water shall be provided by the Contractor. Water is available near the project site for purchase from the Owner.

#### 11.3 Method of Measurement

Pavement grooving will be measured by area to the nearest square yard of runway grooved and accepted. The quantity will be determined by multiplying the width and length of the grooved area. No deduction is to be made for grooving omitted at transverse joints.

#### 11.4 Basis of Payment

Payment will be made under Item 15A, Pavement Grooving, per square yard.

The accepted quantities of pavement grooving will be paid for at the contract unit price per square foot. The contract unit price paid shall include full compensation for furnishing all labor, materials, supplies, tools, equipment, and incidentals and for doing all work involved in grooving the runway pavement including cleanup.

## 12.0 POROUS FRICTION COURSE

### 12.1 Description

This item shall consist of an open-graded, bituminous surface course composed of mineral aggregate and bituminous material, mixed in a central mixing plant, and placed on a prepared surface in accordance with these specifications and shall conform to the dimensions shown on the plans.

### 12.2 Materials

#### 12.2.1 Aggregate

The aggregate shall consist of crushed stone, crushed gravel, or crushed slag with or without other inert finely divided mineral aggregate. The aggregate shall be composed of clean, sound, tough, durable particles, free from clay balls, organic matter, and other deleterious substances. The crushed aggregate portion which is retained on the 3/8-in. (9.5-mm) sieve shall not contain more than 15% by weight of flat or elongated particles as defined in ASTM D 693.

The crushed aggregate portion which is retained on the No. 4 (4.75-mm) sieve shall not show a percentage of wear greater than 30 when tested in accordance with ASTM C 131.

The crushed aggregate portion which passes the 3/4-in. (19.0-mm) sieve and is retained on the No. 4 (4.75-mm) sieve shall not show a total weighted average loss greater than 9% in sodium sulfate solution or a magnesium soundness loss exceeding 12% after five cycles when tested in accordance with ASTM C 88. The soundness test (ASTM C 88) may be waived by the Engineer where porous friction course will not be subjected to freezing and thawing.

The crushed aggregate portion passing the 3/4-in. (19.0-mm) sieve and retained on the 1/4-in. (6.3-mm) sieve shall have an estimated coated area "above 95%" when tested in accordance with ASTM D 1664. If coated area is "below 95%," the asphalt shall be treated with an antistripping agent. The amount of antistripping agent used shall be sufficient to produce a coated area "above 95%."

If crushed gravel aggregate is used, that portion retained on the No. 8 (2.36-mm) sieve and each succeeding coarser sieve shall contain at least 75% by weight of crushed pieces having two or more fractured faces and at least 90% by weight of particles containing one or more fractured faces. To count as a fractured face, the area of the fractured surface must be at least 75% of the smallest midsectional area of the particle being examined. To count as two fractured faces, the angle between two contiguous planes of fracture should be 30 degrees or more.

If crushed slag aggregates are used, the slag shall be air-cooled from the blast furnace process and shall have a compacted unit weight of not less than 70 lb/ft<sup>3</sup> (1.12 Mg/m<sup>3</sup>) when tested in accordance with ASTM C 29.

#### 12.2.2 Filler

If filler, in addition to that naturally present in the aggregate, is necessary, it shall meet the requirements of ASTM D 242. When mineral filler is required to be batched separately, hydrated lime in the amount of 1.5% maximum by weight of the total aggregate shall be batched as part of the added mineral filler. No additional compensation will be allowed the Contractor for furnishing and using hydrated lime or other approved mineral filler that may be required by this specification.

#### 12.2.3 Bituminous Material

The bituminous material shall conform to the following requirements: ASTM D 3381, Viscosity Grade AR-4000, with no more than 1-1/2% neoprene added. Maximum mixing temperature shall be 325°F.

### 12.3 Composition

#### 12.3.1 Composition of Mixtures

The porous friction course shall be composed of a mixture of aggregate, filler, bituminous material, and antistripping agent (if required). The several aggregate fractions shall be sized, graded, and combined in the proportions that meet the requirements of the job mix formula.

#### 12.3.2 Job Mix Formula

No bituminous mixture shall be produced for payment until the Contractor has submitted samples of the materials and the Engineer has established a satisfactory job mix formula for each mixture to be used. The job mix formula for each mixture shall be in effect until modified in writing by the Engineer. The job mix formula for each mixture shall establish a single percentage passing each required sieve size, a single percentage of bituminous material to be added to the aggregate, and a single temperature for the mixture as it is discharged into the hauling units.

The combined aggregate shall be of such size that the percentage composition by weight, as determined by laboratory sieves, will conform to the gradation shown in Table 12.3.2-1 when tested in accordance with ASTM C 136. The range of bituminous contents shown in Table 12.3.2-1 is representative of most crushed stone and crushed gravel aggregates and is not intended to limit the bituminous content established in the job mix formula.

The gradations in Table 12.3.2-1 represent the limits which shall determine the suitability of the aggregate for use from the sources of supply. The aggregate, as finally selected, shall have a gradation within the limits designated in Table 12.3.2-1 and shall not vary from the low limit on one sieve to the high limit on the adjacent sieve, or vice versa, but shall be uniformly graded from coarse to fine.

TABLE 12.3.2-1. AGGREGATE, POROUS FRICTION COURSE

Sieve Size	Percentage by Weight Passing Sieve 3/4 in. maximum
3/4 in. (19.0 mm)	100
1/2 in. (12.5 mm)	70 to 100
3/8 in. (9.5 mm)	45 to 75
No. 4 (4.75 mm)	20 to 40
No. 8 (2.36 mm)	12 to 20
No. 30 (600 micro m)	8 to 14
No. 200 (75 micro m)	3 to 5
Compacted thickness	1 in. (25 mm)
Bituminous content	5% to 7% by weight of total mix

The job mix tolerances shown in Table 12.3.2-2 shall be applied to the job mix formula to establish a job control grading band. The full tolerances will still apply if application of the job mix tolerances results in a job control grading band outside the master grading band.

TABLE 12.3.2-2. JOB MIX FORMULA TOLERANCES  
(based on a single test)

Material	Tolerance
Aggregate passing No. 4 sieve or larger	±7%
Aggregate passing Nos. 8 and 30 sieves	±4%
Aggregate passing No. 20 sieve	±2%
Bitumen	±0.40%
Temperature of mix	±26°F (±14°C)



If a change is made in any component of the bituminous mix, a new job mix formula shall be established and approved by the Engineer before any additional material on the project is produced and placed. When unsatisfactory results or other conditions make it necessary, the Engineer may establish a new job mix formula.

#### 12.3.3 Test Sections

Prior to full plant production, the Contractor shall prepare a quantity of porous friction course (PFC) mixture according to the job mix formula. The amount of mixture should be sufficient to construct a test section 60 ft long and 24 ft wide. The test area will be designated by the Engineer. The mixture shall be placed in two sections and shall be of the same depth specified on the plans. The underlying pavement on which the test section is to be constructed shall be the same as the remainder of the course represented by the test section. The equipment to be used in construction of the test section shall be the same type and weight to be used on the remainder of the course represented by the test section.

If the test section should prove to be unsatisfactory, the necessary adjustments to the mix design, plant operation, and/or rolling procedures shall be made. Additional test sections, as required, shall be constructed and evaluated for conformance to the specifications. When test sections do not conform to specification requirements, the pavement shall be removed and replaced at the Contractor's expense. Full production shall not begin without approval of the Engineer. Test sections will be paid for in accordance with Subarticle 12.6 of this section of the specification.

#### 12.4 Construction Methods

##### 12.4.1 Weather and Seasonal Limitations

The porous friction course shall be constructed only on a dry surface when the atmospheric temperature is 50°F (10°C) and rising (at calm wind conditions) and when the weather is not foggy or rainy.

##### 12.4.2 Bituminous Mixing Plant

The bituminous mixing plant shall include all facilities or equipment necessary to produce the bituminous mix. The facility shall include auxiliary items such as stockpile storage areas, equipment to construct and maintain the stockpiles, cold bin or silo storage, and the feeder system from the cold bin or silo storage to the drier(s).

Plants used for the preparation of bituminous mixtures shall conform to all requirements under Item 1, below, except that scale requirements shall apply only where weight proportioning is used. In addition, batch mixing plants shall conform to the requirements

under Item 2, below, and continuous mixing plants shall conform to the requirements under Item 3, below.

1. Requirements for All Plants: Mixing plants shall be of sufficient capacity to adequately produce the quantity of bituminous mixture for the proposed construction.
  - a. Aggregate Stockpiles: Sufficient storage space shall be provided so that each aggregate size can be kept in separate stockpiles. The stockpile will be constructed in uniform layers by using a clamshell or other approved method to prevent segregation. The use of bulldozers in stockpiling aggregates will not be permitted. The storage yard shall be neat and orderly, and the separate stockpiles shall be readily accessible for sampling.
  - b. Cold Bins: The plant shall have an adequate number of cold bins or silos for each aggregate size. These cold bins or silos shall be constructed so that no overflow from one bin to the other occurs. They shall also have individual, adjustable outlet devices to provide a uniform and continuous flow of materials in the desired proportions. Prior to producing any mixture, the Contractor shall furnish the Engineer with calibrations showing the rate of feed of each aggregate for the cold bin or silo in which it is to be used. Change of material or change of cold bin or silo will require new calibrations. The calibration shall show the rate of feed per minute per unit of opening or setting of feed.
  - c. Feeder for Drier: The plant shall be provided with accurate mechanical means for uniformly feeding the aggregate into the drier to obtain uniform production and temperature.
  - d. Drier: The plant shall include a drier(s) which continuously agitates the aggregate during the heating and drying process.
  - e. Screens: Plant screens, capable of screening all aggregates to the specified size and proportions and having normal capacities in excess of the full capacity of the mixer, shall be provided.
  - f. Dust Collector: The plant shall be equipped with a dust collector to waste any material or to return all or any part of the material uniformly to the mixture as directed.
  - g. Hot Bins: The plant shall include hot bins of sufficient capacity to supply a mixer operating at full capacity. Hot bins shall be arranged to assure separate and adequate storage of appropriate fractions of the aggregates. When used, separate dry storage shall be provided for batching

mineral filler and hydrated lime. The plant shall be equipped to proportion and feed the material into the mixer. Each bin shall be provided with overflow pipes located to prevent backup of material in other compartments or bins. Each compartment shall be provided with its individual outlet gate to prevent leakage. The gates shall cut off quickly and completely. Hot bins shall be constructed so that samples may be obtained readily. Hot bins shall be equipped with adequate telltale devices which indicate the position of the aggregates in the bins at the lower quarter points.

- h. Plant Scales: Scales shall be accurate to 0.5% of the required load. Poises shall be designed to be locked in any position to prevent unauthorized change of position. In lieu of plant scales, the Contractor may provide an approved automatic printer system to print the weights of the material delivered, provided the system is used in conjunction with an approved automatic batching and mixing control system. Such weights shall be evidenced by a weigh ticket for each load. Scales shall be inspected for accuracy and sealed as often as the Engineer may deem necessary. The Contractor shall have on hand not less than ten 50-lb (23-kg) weights for testing the scales.
- i. Equipment for Preparation of Bituminous Material: Tanks for the storage of bituminous material shall be equipped to heat and hold the material at the required temperatures. Heating shall be accomplished by approved means so that flames will not contact the tank. The circulating system for the bituminous material shall be designed to assure proper and continuous circulation during the operating period. Provision shall be made for measuring quantities and for sampling the material in the storage tanks.
- j. Bituminous Control Unit: Satisfactory means, either by weighing or by metering, shall be provided to obtain the specified amount of bituminous material in the mix. Means shall be provided for checking the quantity or rate of flow of bituminous material into the mixer.
- k. Thermometric Equipment: An approved thermometer of adequate range shall be placed in the bituminous feed line at a suitable location near the discharge valve of the mixer unit. The plant shall also be equipped with an approved thermometric instrument placed at the discharge chute of the dryer to indicate the temperature of the heated aggregates.
- l. Safety Requirements: Adequate and safe stairways to the mixer platform and sampling points shall be provided. Guarded ladders to other plant units shall be placed at

all points where accessibility to plant operations is required. Accessibility to the top of truck bodies shall be provided by a suitable device to enable the Engineer to obtain mixture samples and temperature data. A means shall be provided to raise and lower scale calibration equipment, sampling equipment, and other similar equipment between the ground and the mixer platform. All belts, gears, pulleys, chains, sprockets, projecting setscrews, keys, and other dangerous moving parts shall be guarded to prevent inadvertent contact by workmen or other moving equipment. Ample and unobstructed passage shall be maintained at all times in and around the truck loading area. This area shall be kept free of drippings from the mixing platform.

- m. Truck Scales: The bituminous mixture shall be weighed on approved scales furnished by the Contractor or on public scales at the Contractor's expense. Scales shall be inspected for accuracy and sealed as often as the Engineer deems necessary.

## 2. Requirements for Batching Plants

- a. Weigh Box or Hopper: The equipment shall include a means for accurately weighing each size of aggregate in a weigh box or hopper of ample size to hold a full batch without hand raking or running over. The gate shall close tightly so that no material is allowed to leak into the mixer while a batch is being weighed.
- b. Bituminous Control: The equipment used to measure the bituminous material shall be accurate to within  $\pm 0.5\%$ . The bituminous material bucket shall be of a nontilting type with a loose sheet metal cover. The length of the discharge opening of the spray bar shall not be less than three fourths the length of the mixer, and it shall discharge directly into the mixer. The bituminous material bucket, its discharge valve(s), and the spray bar shall be adequately heated. Steam jackets, if used, shall be efficiently drained, and all connections shall be constructed so that they will not interfere with the efficient operation of the bituminous scales. The capacity of the bituminous material bucket shall be at least 15% of the weight of bituminous material required in any batch. The plant shall have an adequately heated, quick-acting, nondrip charging valve located directly over the bituminous material bucket.

The indicator dial shall have a capacity of at least 15% in excess of the quantity of bituminous material used per batch. The controls shall be constructed to lock at any dial setting and automatically reset to that reading after each additional batch of bituminous material. The

dial shall be in full view of the mixer operator. The flow of bituminous material shall be automatically controlled to begin when the dry mixing period is over. All of the bituminous material required for one batch shall be discharged in not more than 15 seconds after the flow has begun. The size and spacing of the spray-bar openings shall provide a uniform application of bituminous material the full length of the mixer. The section of the bituminous line between the charging valve and the spray bar shall have a valve and an outlet for checking the meter when a metering device is substituted for a bituminous material bucket.

- c. Mixer: The batch mixer shall be an approved type capable of producing a uniform mixture with well-coated aggregate in the prescribed mixing time within the job mix tolerance specified. If not enclosed, the mixer box shall be equipped with a hood to prevent loss of dust.
- d. Control of Mixing Time: The mixer shall be equipped with an accurate time lock to control the operations of a complete mixing cycle. It shall lock the weigh-box gate after the charging of the mixer and keep it locked until the closing of the mixer gate at the completion of the cycle. It shall lock the bucket throughout the dry mixing period and shall lock the mixer gate throughout the dry and wet mixing periods. The dry mixing period is the time interval between the opening of the weigh-box gate and the introduction of bituminous material. The wet mixing period is the time interval between the introduction of the bituminous material and the opening of the mixer gate.

The timing control shall be flexible and shall be capable of settings at 5-second intervals or less throughout a 3-minute cycle. A mechanical batch counter shall be installed as a part of the timing device and shall be designed to register only completely mixed batches.

The setting of time intervals shall be at the direction of the Engineer who shall then lock the case covering the timing device. It shall remain locked until a change is made in the timing periods.

### 3. Requirements for Continuous Plants

- a. Aggregate Proportioning: The plant shall include means for accurately proportioning each size of aggregate.

The plant shall have a feeder mounted under each compartment bin. Each compartment bin shall have an accurately controlled individual gate to form an orifice for the

volumetric measuring of material drawn from each compartment. The feeding orifice shall be rectangular with one dimension adjustable by positive mechanical means and provided with a lock.

Indicators shall be provided for each gate to show the respective gate opening in inches.

- b. Weight Calibration of Aggregate Feed: The plant shall include a means to calibrate gate openings by weighing test samples. Provision shall also be made so that materials fed out of individual orifices may be bypassed to individual test boxes. The plant shall be equipped to conveniently handle individual test samples of not less than 200 lb (92 kg). Accurate scales shall be provided by the Contractor to weigh such samples. Charts showing the rate of feed per minute for each hot bin shall be provided.
- c. Synchronization of Aggregate Feed and Bituminous Materials Feed: A satisfactory interlocking mechanical means or any other positive method approved by the Engineer shall be provided to afford positive interlocking control between the flow of aggregate from the bins and the flow of bituminous material from the meter or other proportioning device.
- d. Mixer: The plant shall include an approved continuous mixer adequately heated and capable of producing a uniform mixture within the job mix tolerances. It shall be equipped with a discharge hopper with dump gates to permit rapid and complete discharge of the mixture. The paddles shall be adjustable for an angular position mix. The mixer shall have a manufacturer's plate giving the net volumetric contents of the mixer at the several heights inscribed on a permanent gage and the rate of feed of aggregate per minute at plant operating speed. Unless otherwise required, the minimum mixing time shall be determined by dividing the weight of its contents at operating level by the weight of the mixture delivered per second by the mixer.

The weights for the job will be determined by tests made by the Engineer. The pugmill shall be equipped with a discharge hopper having a capacity of approximately 1 ton (90 kg). The hopper will be equipped with dump gates that will permit rapid and complete discharge of the bituminous mixture without segregation.

#### 12.4.3 Hauling Equipment

Trucks used for hauling the bituminous mixture shall have tight, clean, smooth beds. To prevent the mixture from adhering to them,

the truck beds shall be lightly coated with a minimum amount of concentrated hydrated lime and water solution. The truck beds shall be raised to drain any excess solution before loading the mixture in the trucks. Each truck shall have a suitable cover to protect the mixture from adverse weather or long hauls. An insulated bed may be required to maintain the mixture at the specified temperature during hauling.

#### 12.4.4 Bituminous Pavers

Bituminous pavers shall be self-contained, power-propelled units with an activated screed or strike-off assembly, heated if necessary, and shall be capable of spreading and finishing courses of bituminous plant mix material which will meet the specified thickness, smoothness, and grade.

The paver shall have a receiving hopper of sufficient capacity to permit a uniform spreading operation. The hopper shall be equipped with a distribution system to place the mixture uniformly in front of the screed. The screed or strike-off assembly shall produce a finished surface of the required evenness and texture without tearing, shoving, or gouging the mixture.

The paver shall be capable of operating at forward speeds consistent with satisfactory laying of the mixture.

If an automatic grade control device is used, the paver shall be equipped with a control system capable of automatically maintaining the screed elevation as specified herein. The control system shall be automatically actuated from either a reference line or a surface through a system of mechanical sensors or sensor-directed mechanisms or devices which will maintain the paver screed at a predetermined transverse slope and at the proper elevation to obtain the required surface.

#### 12.4.5 Rollers

A minimum of two self-propelled, steel-wheel rollers shall be furnished. They shall be in good condition, capable of reversing without backlash, and capable of operating at slow speeds to avoid displacement of the bituminous mixture. The wheels shall be equipped with adjustable scrapers, water tanks, and sprinkling apparatus to prevent the bituminous mixture from sticking to the wheels. The weight of each roller shall be 6 to 12 tons (5,400 to 10,800 kg). The use of equipment which results in excessive crushing of the aggregate will not be permitted.

#### 12.4.6 Preparation of Mineral Aggregate

The aggregate for the mixture shall be dried and heated at the central mixing plant before entering the mixer. When introduced into the mixer, the combined aggregate moisture content (weighted according to the composition of the blend) shall be less than 0.25%

for aggregate blends with water absorption of 2.5% or less, and less than 0.50% for aggregate blends with water absorption greater than 2.5%. Water absorption of aggregates shall be determined by ASTM C 127 and ASTM C 128. The water absorption for the aggregate blend shall be the weighted average of the absorption values for the coarse aggregate retained on the No. 4 sieve (4.75 mm) and the fine aggregate passing the No. 4 sieve (4.75 mm). The water content test will be conducted in accordance with ASTM C 566. In no case shall the moisture content be such that foaming of the mixture occurs prior to placement. At the time of mixing, the temperature of the aggregate shall be within the range specified in the job mix formula. The maximum temperature and rate of heating shall be such that no damage occurs to the aggregates. Particular care shall be taken so that aggregates high in calcium or magnesium content are not damaged by overheating. The aggregate shall be screened to specified sizes and conveyed in separate bins ready for mixing with bituminous material.

#### 12.4.7 Preparation of Bituminous Mixture

The bituminous mixture shall be prepared in a central mixing plant. The mixture shall be prepared at the temperature designated by the Engineer within the range shown in Subarticle 12.2.3 of this section of the specification.

The dry aggregate shall be combined in the plant in the proportionate amounts of each aggregate size required to meet the specified gradation. The quantity of aggregate for each batch shall be determined, measured, and conveyed into the mixer. In case of volumetric proportioning, the size of the openings shall be determined, and the gates shall be locked in position.

The quantity of bituminous material for each batch or the calibrated amount for continuous mixers shall be determined by the Engineer. It shall be measured by weight and introduced into the mixer within the temperature range specified in the job mix formula. For batch mixers, all aggregates shall be in the mixer before the bituminous material is added. In no case shall the temperature of the aggregate be more than 25°F (4°C) above the temperature of the bituminous material when adding the bituminous material. As determined by the Engineer, the mixing shall continue until all particles are coated uniformly. In no case shall the bituminous mixture be stored in storage silos or surge bins.

#### 12.4.8 Transportation and Delivery of the Mixture

The mixture shall be transported from the central mixing plant to the paving job in trucks described in Subarticle 12.4.3 of this section of the specification. The mixture shall be placed at a temperature between 200°F (94°C) and 295°F (146°C). Delivery of the mixture shall be scheduled so that spreading and rolling of a day's production can be completed during daylight hours the same day.



#### 12.4.9 Spreading and Laying

1. Preparation of Existing Surfaces: All porous friction courses shall be constructed on an existing pavement surface that is structurally sound, in good condition, constructed to new pavement surface course smoothness criteria, and has Marshall stability and flow values comparable to those specified in Section 9.0 of these specifications.

Immediately before placing the porous friction course, the underlying course shall be cleared of all loose or deleterious material with power blowers, power brooms, or hand brooms as directed. A tack coat conforming to Section 8.0 of these specifications shall be placed, as directed by the Engineer, on those existing surfaces where a tack coat is necessary for bonding the PFC to the existing surface. If emulsified asphalt is used, placement of the PFC can be applied immediately. However, if cutback asphalt is used, placement of the PFC must be delayed until the tack coat has properly aired.

2. Placing: Hauling over material already placed shall not be permitted until the material has been thoroughly compacted as specified and allowed to develop its stability for a period of at least 12 hours. In areas where extremely hot temperatures occur, it is suggested that no traffic be allowed on the PFC until it has cooled overnight. Traffic should be discontinued if any closing of the PFC is observed. The bituminous mixture shall be placed at the required minimum lane width with an approved bituminous paver as specified in Subarticle 12.4.4.

#### 12.4.10 Compaction of Mixture

After spreading, the mixture shall be thoroughly and uniformly compacted with power rollers. Rolling of the mixture shall begin as soon after spreading as it will bear the roller without undue displacement or hair-checking. Rolling shall be initiated with the drive wheel toward the paving machine. The sequence of rolling the first paving lane should be to first roll the lower edge (with reference to the transverse slope) of the lane and then to roll the upper edge. The interior of the lane should then be rolled from the lower side toward the upper edge with overlapping roller paths. On adjoining paving lanes, rolling shall begin by overlapping the joint (with the previous lane) by 6 to 9 in. (15 to 23 cm) and then rolling the outside edge of the new lane. The interior should be rolled from the outside edge toward the compacted joint with overlapping wheel paths. Alternate trips of the roller shall be of slightly different lengths. The number of passes with a steel-wheel roller shall be as determined by the test section. The optimum weight of the roller shall also be determined during test section construction.

The speed of the roller shall be slow enough to avoid displacement of the hot mixture. Any displacement occurring as a result of

reversing the direction of the roller, or from any other cause, shall be corrected at once by raking and applying fresh mixture.

Sufficient rollers shall be furnished to handle the output of the plant. Rolling shall continue until all roller marks are eliminated and the surface is of uniform texture and conforms to the required cross section.

To prevent adhesion of the mixture to the roller, the wheels shall be kept properly moistened, but excessive water will not be permitted.

In areas not accessible to the roller, the mixture shall be thoroughly compacted with hot hand tampers.

Any mixture which becomes loose and broken, mixed with dirt, or in any way defective shall be removed and replaced with fresh hot mixture and immediately compacted to conform to the surrounding area. This work shall be done at the Contractor's expense. Skin patching and handworking of the PFC mixture will not be allowed.

#### 12.4.11 Joints

The formation of all joints shall be made in such a manner as to ensure a continuous bond between old and new sections of the course. All joints shall present the same texture, density, and smoothness as other sections of the course.

The roller shall not pass over the unprotected end of the freshly laid mixture except when necessary to form a transverse joint. When necessary to form a transverse joint, it shall be made by means of placing a bulkhead or by tapering the course, in which case the edge shall be cut back to its full depth and width on a straight line to expose vertical face. In both methods, all contact surfaces shall be given a tack coat of bituminous material before placing any fresh mixture against the joint.

Longitudinal joints which are irregular, damaged, or otherwise defective shall be cut back to expose a clean, sound surface for the full depth of the course. All contact surfaces shall be given a tack coat of bituminous material prior to placing any fresh mixture against the joint. The longitudinal joint shall offset that in the existing course by at least 1 ft (30 cm).

#### 12.4.12 Shaping Edges

While the surface is being compacted and finished, the Contractor shall carefully shape the longitudinal outside edges of the PFC to a vertical face at the established edge. When transitioning from PFC to existing pavement, transverse edges shall be constructed with a finer graded bituminous mixture.

#### 12.4.13 Surface Tests

After completion of the final rolling, the finished surface shall be tested with a 16-ft (5-m) straightedge and shall not vary more than 1/4 in. (6 mm). The 16-ft (5-m) straightedge shall be applied parallel with and at right angles to the runway centerline in a pattern that includes longitudinal and transverse joints. The 16-ft (5-m) straightedge shall be advanced approximately one half its length in the line of measurement.

Areas of the porous friction course exceeding the specified tolerances shall be corrected at the Contractor's expense by removing the defective work and replacing it with new material. Skin patching or handworking will not be permitted.

#### 12.4.14 Sampling PFC Mixture and Hot Bins

Samples of the PFC mixture shall be taken at the point of discharge in hauling units and tested to control uniformity in the bituminous content and gradation. Sample shall be taken in accordance with ASTM D 979. Enough mixture shall be taken to prepare duplicate tests on each sample of mixture in accordance with ASTM D 2172. Samples shall be taken at least once for any central plant run of more than 30 minutes and at least twice for any central plant run of more than 5 hours.

Should the bituminous content of the duplicate tests agree within 0.50%, the average results shall be recorded. Variations greater than 0.50% between duplicate tests of the same sample shall also be recorded, and duplicate tests on an additional sample shall be run. The average value of the bituminous content should fall within the tolerance of the job mix formula as specified in Subarticle 12.3.2 of this section of the specification. Should the average bituminous content for four samples not fall within the job mix tolerances, the Engineer may order the Contractor to cease production until such out-of-tolerance conditions have been remedied by the Contractor. The gradation of the residual aggregate should be determined by using AASHTO T30 and compared to the approved job mix formula.

The samples of PFC mixture shall be used to control the uniformity of the Contractor's plant production. In addition, the Contractor shall clearly mark each hauling unit from which the representative samples have been taken so that the same mixture sample may be located in the completed pavement.

Completed PFC will be determined "acceptable" or "unacceptable" on the basis of visual inspection by the Engineer. The Engineer will immediately notify the Contractor of visual defects such as non-uniform texture, roller marks, bleeding of bituminous material, cracking and shoving of the mixture, and evidence of aggregate crushing during the roller operations, or nonconformance to the surface smoothness criteria as specified in Subarticle 12.4.13 of this section of the specification.

"Unacceptable" PFC shall be removed, leaving a vertical face at the remaining PFC. The underlying surface shall be cleaned and a tack coat applied prior to replacing the PFC. All work shall be at the Contractor's expense. Unacceptable PFC will not be measured for payment.

In addition to sampling and testing the PFC mixture, the Engineer will sample each hot bin twice daily and furnish a gradation analysis of each hot bin according to ASTM C 136. The combined gradation analysis of the hot bins shall fall within the job mix formula tolerances. Should the hot bin gradation analysis fail to meet the tolerances of the job mix formula (on the same sieve size), the Engineer may order another analysis in addition to the two analyses required each day to confirm the results of the previous tests or tell the Contractor to cease plant production until such out-of-tolerance conditions have been corrected.

#### 12.4.15 Bituminous and Aggregate Material (Contractor's responsibility)

Samples of the bituminous and aggregate materials that the Contractor proposes to use, together with a statement of their source and character, shall be submitted for approval prior to use. The Contractor shall require the manufacturer or producer of the bituminous and aggregate materials to furnish material subject to this and all other pertinent requirements of the contract. Only those materials which have been tested and approved for the intended use will be acceptable.

The Engineer, or the Engineer's authorized representative, shall have access, at all times, to all parts of the paving plant to inspect the equipment, conditions, and operation of the plant; to verify the weights or proportions and character of materials; and to determine the temperatures maintained in the storage of the bituminous material and preparation of the mixtures.

The Contractor shall furnish the vendor's certified test reports for each carload or equivalent of bituminous material shipped to the project. The report shall be delivered to the Engineer before permission is granted to use the material. The vendor's certified test report for the bituminous material shall not be interpreted as a basis for final acceptance. All test reports shall be subject to verification by testing sample materials received for use on the project.

#### 12.4.16 Protection of Pavement

After final rolling, no vehicular traffic of any kind shall be permitted on the pavement until it has cured at least 12 hours. Newly constructed pavement areas shall not be opened to aircraft traffic until 24 hours after completion or unless otherwise authorized by the Engineer.

## 12.5 Method of Measurement

Porous friction course shall be measured by the number of square yards of mixture used in the accepted work.

Only the areas of the porous friction course meeting the following thickness requirements shall be measured for payment:

To determine the thickness of the finished PFC, the Engineer will take one core sample, not less than 2 in. (5 cm) in diameter, at random from each unit of the completed PFC area. A unit of the completed area shall be one paving lane wide by 1000 ft (304 m) long. The last unit in any one paving lane shall include any remaining length in addition to the 1000 ft.

When the measurement of any core is more than the maximum or less than the minimum allowable thickness, as shown in Table 12.5-1, additional cores shall be taken at 20-ft intervals (parallel to and at right angles to the runway centerline) until the completed PFC is within such maximum or minimum thickness for the subunit being tested. Out-of-tolerance areas shall be deducted from the total square yards of PFC for payment. If, in the Engineer's judgment, such out-of-tolerance areas warrant removal, the PFC shall be removed and the underlying course shall be cleaned (ready for reconstruction), all at the Contractor's expense.

TABLE 12.5-1. ALLOWABLE FINISHED PFC THICKNESS

	Nominal (in.)	Maximum (in.)	Minimum (in.)
3/4-in. aggregate	1.25	1.75	1.0

## 12.6 Basis of Payment

Payment will be made under Item 16A, Porous Friction Course, per square yard.

Payment shall be made at the respective contract prices per square yard for porous friction course. The price shall be full compensation for furnishing all materials; for all preparation and storage of materials; for cleaning the existing surface; for mixing, tack coat, hauling, placing, and compacting the mixture (including initial test section); and for all tools, equipment, and incidentals necessary to complete each item. No separate payment is included in the contract for furnishing and batching mineral filler, or antistripping agents, should such items be required.

Rehabilitation of the existing pavement surface and the tack coat shall be measured and paid for at their respective contract prices.

12.7 Testing Requirements

ASTM C 29	Unit Weight of Aggregate
ASTM C 88	Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C 127	Specific Gravity and Absorption of Coarse Aggregate
ASTM C 128	Specific Gravity and Absorption of Fine Aggregate
ASTM C 131	Resistance to Abrasion of Small Size Coarse Aggregate by Use of the Los Angeles Machine
ASTM C 136	Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C 566	Total Moisture Content of Aggregate by Drying
ASTM D 693	Crushed Stone, Crushed Slag, and Crushed Gravel for Bituminous Macadam Base and Surface Courses of Pavements
ASTM D 979	Sampling Bituminous Paving Mixtures
ASTM D 1664	Coating and Stripping of Bitumen - Aggregate Mixtures
ASTM D 2172	Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
AASHTO T30	Mechanical Analysis of Extracted Aggregate

12.8 Material Requirements

ASTM D 242	Mineral Filler for Bituminous Paving Mixtures
ASTM D 946	Asphalt Cement for Use in Pavement Construction
ASTM D 3381	Viscosity-Graded Asphalt Cement for Use in Pavement Construction
AASHTO M226	Viscosity Graded Asphalt Content